Developing formal, informal and popular geographical knowledges through encounters with Dorset's coastal landscape

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Declaration

This thesis is the result of my own work and contains nothing which is the outcome of work done in collaboration. None of the material has previously been submitted for a degree at this or any other university.

It does not exceed 100,000 words in length.

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Abstract

Threats to the popularity of geography as a subject within school and higher education have been recognised and explored within research. Documented declines in student numbers are considered to relate at least partially to an absence of adequate discourse and communication between different branches of geography. This thesis investigates the variability of diverse geographical experiences and the opportunities for formal, informal and popular geographical learnings that may arise at the Dorset coast. The pedagogic and aesthetic significance of the coastline establishes this location as particularly suitable for the study of variable geographical encounters.

Formal approaches to geographical learning at the Dorset coast are investigated through the pedagogical framework of fieldwork. The outcome of students' fieldwork encounters may be dependent upon factors including geographical representations, learning structures and non-academic experiences. Diverse fieldwork configurations may create a variability of positive and negative geographical encounters. The development of informal geographical knowledges is explored through popular (touristic) encounters. Many popular activities and experiences at the Dorset coast have an inherently geographical relevance. However, public audiences may frequently disregard the opportunities for informal geographical learning which arise from such interactions.

Investigations focusing upon the Dorset coast substantiate suggestions that considerable disparities may exist between geographical domains, in particular between school and higher education geographies, and between popular and academic geographies. Pedagogic inconsistencies and communication shortcomings may constitute a threat to the future of geography. The thesis thus concludes by proposing a possible approach towards the (re)establishment of information and discourse exchanges between variable branches of geographical learning and encounter.

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Chapter 1

Introduction

Chapter 1: Introduction

1.1 Background to the present study

The need for this study arises in part from the acknowledgement that the popularity of geography as a subject for study within school and higher education domains is under threat (Bradford, pers. comm.; see also Woodward & Smithers, 2000). Reasons for the decline in student recruitment are varied. Binns (1996) notes that the diversification of subject availability at secondary school level, including the introduction of vocational and management-based course options, has contributed to a reduction in student numbers. A similar effect has been recognised within higher education (Haggett, 1996). Rawling (1996*a*) suggests that the discontinuity between school and higher education geographies may act as a further deterrent to students. However, theories for the decline in geographical uptake within formal education also relate to suggestions that the subject fails to connect to public interests and understandings outside the realms of academia (Shaw & Matthews, 1998).

Questions of the accessibility and relevance of science amongst publics have emerged since the Second World War (Gregory & Miller, 1998*a*). The specialist and often secretive nature of scientific research and the sometimes controversial nature of findings has generated widespread feelings of misunderstanding and distrust (Bauer *et al.*, 1995; Wynne, 1996). Despite the acknowledgement that geography holds relevance to variable aspects of popular experience and encounter, public perceptions of geography are frequently of an academic and science-based subject (Shaw & Matthews, 1998). The notion that geography holds little relevance or significance to everyday life (see Clarke, 1991) may feed back into problems of student recruitment within schools and higher education.

To address concerns surrounding the future of geography, research is required into the opportunities for enhancing knowledges of the subject's relevance and interest. The Dorset coast provides an ideal location for the study of two particular frameworks for geographical encounter. First, Ballantyne (1998, 1999) suggests that the fieldtrip constitutes one of the most enjoyable aspects of formal geographical learning. It may further be important in the forging of links between education and everyday experience (Bowden, 1990; Foskett, 1997). Fieldwork thus has the potential to encourage students to pursue geography within formal education. Second, Williams & Shaw (1997) suggest that the recent diversification and specialisation of the UK tourism industry has raised the profile of natural settings as tourist destinations. The natural environment of the Dorset coast constitutes a primary motivation for tourist visits (Dorset Coast Forum, 1998*b*) and Dorset County Council, alongside the Jurassic Coast Project and other organisations, creates opportunities for informal geographical learning through the provision of interpretative resources at the coast.

The development (popularisation) of more widespread geographical knowledges requires the connection and co-operation of formal and informal elements of geographical learning, to enable an exchange of ideas and information between variable audiences. Shaw & Matthews (1998) suggest that such a connection is not currently established. Indeed, barriers to communication exist even between different levels of formal education (Goudie, 1993; Daugherty & Rawling, 1996), contributing to the diminishing of student recruitment. Bradford (1996:286) highlights that "a major future concern for geographers will be the bridging of the gap that has emerged between secondary and higher education". In the process of popularising geography, therefore, the relationships both between and within formal and informal learning domains must be investigated.

1.2 Research objectives

This study has three main objectives.

1. To examine the contribution of fieldwork to the development of formal geographical knowledges. Ballantyne (1998, 1999) suggests that fieldwork is a favoured aspect of geographical learning, hence it may make a particular contribution to geographical encounter.

2. To study popular (informal) geographical encounters at the Dorset coast through the medium of tourist visits. Williams & Shaw (1997) suggest that the profile of the natural environment as a destination for tourism encounters has increased, but it does not necessarily follow that the geography of the landscape is acknowledged. To determine the extent to which geographical interpretation provision in Dorset contributes to the popularisation of geographical knowledges.

3. To develop a framework for the exchange of ideas and the (re)connection of communication channels between variable geographical audiences in an attempt to enhance prospects for the development of diverse but integrated geographical knowledges within formal and informal learning domains.

1.3 The field area

The research within this thesis was undertaken in Dorset, a county located on the south coast of England (see *Figure 1.i*). Dorset, which has an area of 2,653 km^2, includes 88 km of coastline spanning 140 million years of geological history (Dorset County Council, 1994). The geological variability of Dorset may be considered to be responsible for the spectacular and educationally significant nature of its coastal landscape.

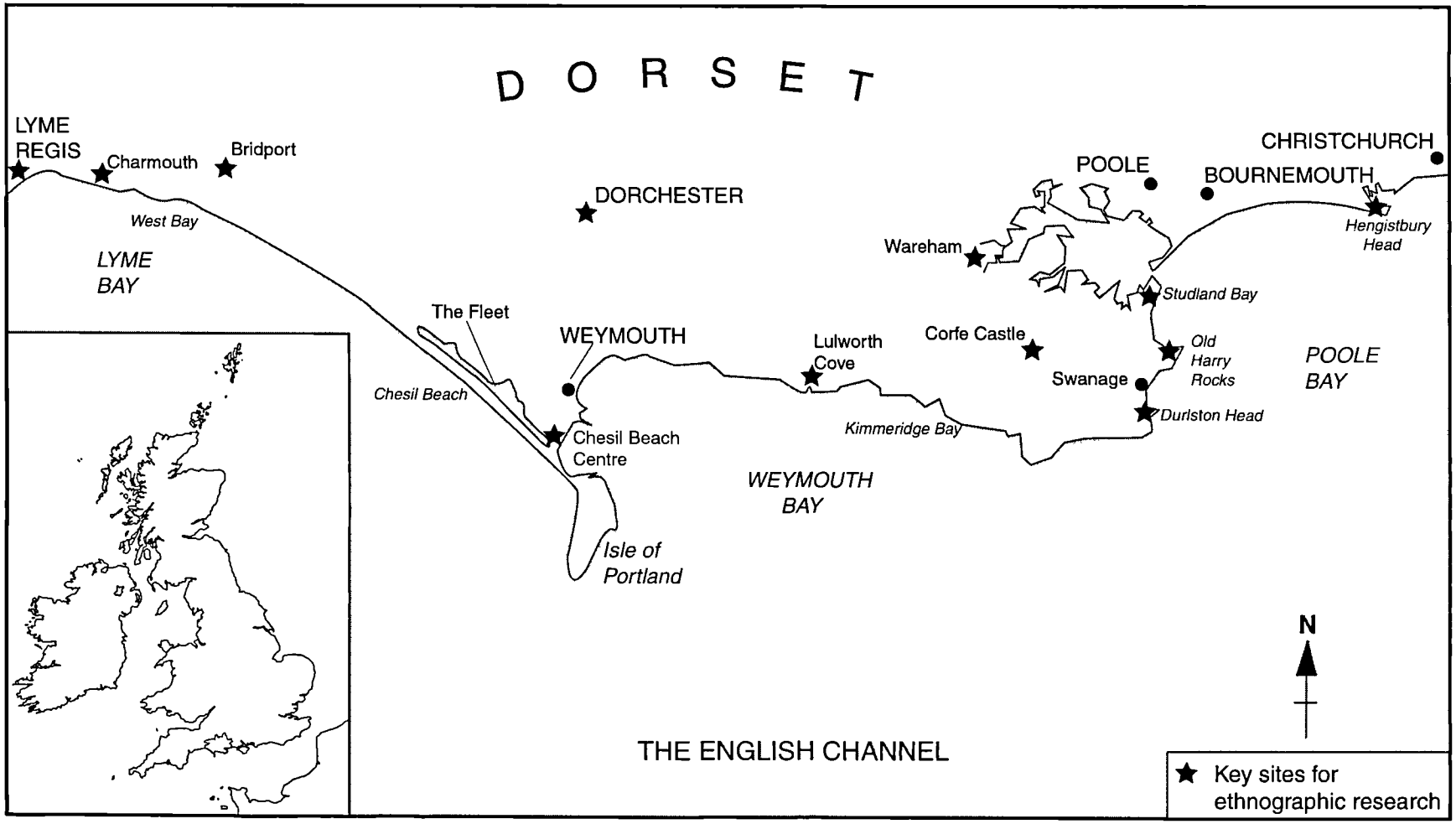


Figure 1.i: Location map of Dorset, highlighting key coastal sites (after Dorset County Council, 1994:2).

For formal educational audiences, the Dorset coast provides opportunity for the study of an inspiring and widely studied geographical landscape. For over three hundred years scientists have conducted research on the Dorset coast, contributing to major developments in the spheres of geological mapping (e.g. William Smith, 1769-1839), palaeontology (e.g. Gideon Mantell, 1790-1873) and geomorphology (e.g. Charles Lyell, 1797-1875) (Dorset County Council *et al.*, 2000). Mary Anning, who discovered the first British ichthyosaur in 1814 – now displayed in the Natural History Museum, London – was born and lived in Lyme Regis. Today, the coastline is still the subject of much research and investigation amongst contemporary scientists, including geologists and geographers. The diverse nature of the coastline is such that it incorporates many of the processes and landforms forming the core of physical geography learning. As a result, it is widely cited within curricula, syllabuses and textbooks, and is very popular for educational visitation at primary, secondary and higher education levels. "Chesil Beach, the Fleet, the Isle of Portland, Durdle Door, Lulworth Cove, Old Harry Rocks, Poole Harbour and Hengistbury Head are all names that are as familiar to anyone learning geography as they are to the people that live near them" (Dorset County Council, 1994:3).

For visiting public audiences, the Dorset coast provides a visually aesthetic and diverse landscape resource for tourism encounters. The landforms include some spectacular and unique features such as the flawless arch of Durdle Door, the vivid chalk stacks of Old Harry Rocks and the seemingly endless shingle ridge of Chesil Beach. The presence of these landforms within such a small stretch of coastline creates an ideal viewing opportunity which is frequently conducted from the popular Dorset Coast Path (South West Coast Path Project, 1995). Individuals may visit the Dorset coast for a variety of reasons – due to special interests in, for example, archaeology, wildlife and heritage, or merely to take advantage of the numerous beaches and mild climate. Whatever the motives for a visit, activities at the Dorset coast are undertaken accompanied by the backdrop of a spectacular and scenic landscape. Interests generated from touristic

encounters in Dorset may be developed through interpretation provided at one of the coast's six heritage centres.

The unique natural environment of the Dorset coast is recognised within its numerous conservation designations. The whole of the coastline is classified as either an Area of Outstanding Natural Beauty (AONB) or a Site of Special Scientific Interest (SSSI). These national designations offer protection to sites according to their aesthetic value or importance for nature conservation. The majority of the coast is also protected by the Countryside Agency's Heritage Coast specification and by the European Council Habitats Directive. Chesil Beach and the Fleet are protected by the international Ramsar Convention for wetland areas. In addition, the National Trust owns 33 km of land along the coastline, including the landforms of Golden Cap and Burton Beach as well as extensive areas of Purbeck. Over the past six years, Dorset County Council in conjunction with Devon County Council and the Dorset Coast Forum, has researched and developed a proposal for the Dorset and East Devon coast to be nominated for inclusion within the World Heritage List. The nomination is based upon the coast's geological and landscape importance (Dorset County Council *et al.*, 2000). In June 2000 the nomination was submitted to UNESCO for consideration. The county awaits the verdict as to whether this spectacular stretch of coastline will be afforded even greater celebrity and protection. In the light of the proposed World Heritage Site designation and the increased visitation that this would undoubtedly bring, the Dorset coast is an ideal location for the study of formal and informal geographical knowledges amongst variable audiences.

1.4 Approach and organisation of thesis

The contents of this thesis may be summarised as follows. Chapter 2 reviews the literature upon which this study endeavours to expand, including work within the spheres of formal and informal geographical learnings, tourism, education and interpretation. Chapter 3 assesses the approaches to data collection and analysis adopted within the study. A diversity of primarily

qualitative methodologies are reviewed and their role within the research outlined.

Chapter 4 presents the results from the first element of the study, relating to formal geographical learnings within the field. The findings, primarily based upon the participant observation of school and higher education fieldtrips, assess approaches to teaching, learning and experiencing geography in the field. A specific case study involving a primary school group highlights the variable experiences of students in the field. Chapter 5 presents the results from the study of informal geographical encounters. Here, the research was primarily based upon tourist audiences, assessing perceptions and knowledges of geography amongst visiting publics. Chapter 5 also explores the extent to which interpretation relating to Dorset's coastal landscape contributes to the geographical knowledges of its audiences. Chapter 6 assesses the association between formal and informal geographies, highlighting the threats to the subject which may result from the failure of communication channels. The chapter also presents a model of (re)connection which may contribute to the popularisation of geography and hence to the development of formal and informal geographical knowledges.

Finally, in chapter 7, the original contributions made by the thesis are reviewed and the respects in which previous research has been expanded are discussed. In conclusion, recommendations are made for further study.

Chapter 2

Background to the Study

Chapter 2: Background to the study

2.1 Introduction

On account of the novel and somewhat unusual nature of research conducted within this thesis – the use of sociological and ethnographic methodologies to explore perceptions and knowledges of an inherently physical (scientific) subject – several contextualising frameworks are required. Discussion has therefore been subdivided into six themes, reflecting the progression of the thesis as a whole. The first theme introduces the broad context of the study, considering the foundations of postmodernism and the sociology of science and nature. Four themes subsequently focus upon the variable nature of geographical audiences, comprising discussion of public understandings of science, tourism, formal education and informal geographical learning. Finally, a key theme to emerge from the study is raised relating to the gaps or disparities which exist between these different geographical audiences.

2.2 Introducing the contextual framework

The contextual framework of the study is embedded within the realms of SSK, the Sociology of Scientific Knowledge. An inherently postmodern approach to scientific research, sociological studies of science have become prevalent since the 1970s, derived from a dissatisfaction with elements of the modernist tradition, a desire for the liberation of views and a recognition of the potentials for knowledge production and transfer (Harvey, 1990). Postmodernism and the Sociology of Science thus form the opening two subsections of contextualised discussion. The thesis is additionally based upon themes of disciplinary transformation. Geographical traditions make broad distinctions between research of a human (sociological) and physical

(geomorphological) nature. Research presented within this study encompasses elements of both human and physical geographies and may be considered progressive in this respect. Discussion of disciplinary division within geography forms the basis of the third and final subsection of contextual foundation.

2.2.1 Postmodernism

There is no single, universally accepted definition of postmodernism (Bale, 1996) – indeed, such *definition would run contrary to the doctrines of* postmodernist thought. Agreement between authors is often limited to the acknowledgement of a postmodern departure from the attributes of modernism, yet the ambiguities of modernism add further imprecision to such definition (Harvey, 1990). Gregory & Miller (1998*a*; see also Harvey, 1990; Unwin, 1992) suggest that a fundamental characteristic of postmodernism is a propensity towards the rejection of the 'grand schemes' or 'meta-narratives', for example Marxism, Freudianism and the Enlightenment, so prevalent during the modernist era. The wholesale rejection of such schemes, responsible for "[dissolving] the flux of social life in the name of totalising theory" (Driver, 1992:33), is in response to key themes of postmodernist thought which include acknowledgements of variability and relativity in research and acceptance of the importance of universality and otherness (Harvey, 1990; Gregory & Miller, 1998*a*; Monk, 2000). Bowlby (1992:358) highlights that "post-modernism suggests that truths and meanings are relative to your standpoint – your 'place' – and that different individuals and groups will have competing, *but equally valid*, goals and interpretations of the world".

In its earliest form, postmodernism emerged as a response to modernist architecture (Watkin, 1986; Harvey, 1989, 1990). However, postmodernist thought gathered pace during the 1970s and progressed into the realms of literature, philosophy and the social sciences. Key themes, focusing upon the representation of the views of the minority (the 'other'),

liberation, communication and knowledge dissemination, have persisted (Lyotard, 1984). Within geography, the emergence of postmodernist thought has encouraged the study of minority groups and under-represented cultures and societies. Monk (2000) notes in particular an abundance of research into gender, non-white race, gay, lesbian and bi-sexuality, immigrant populations, children and the physically disabled. In addition, there is increasing recognition amongst geographers of the multiple representations / interpretations of natural or artificial landscapes and texts which result from cultural influence and conditioning (Burgess *et al.*, 1988; Duncan & Duncan, 1988; Gregory & Ley, 1988). Producers and consumers of landscapes and texts may construct variable contexual representations and meanings. Acknowledgement of the validity of individual constructions allows a heterogeneity of discourse (Harvey, 1990; Derrida, 1992).

Traditional approaches to research within science disciplines have prompted criticism from postmodern quarters (Gregory & Miller, 1998*a*). Postmodern questioning of the reliability of science and the encouragement of non-specialist participation runs contrary to the established doctrines of many scientific institutions (Hassan, 1985; see also Ross, 1996). The governance of science by meta-narrative and static theory contradicts the very basis of postmodern thought. The advent of postmodernism has thus prompted research into the discourse, knowledge and research generated within scientific institutions, constituting study of the 'sociology of science'.

2.2.2 The sociology of science

Study into the sociology of science was pioneered in the 1930s by Robert Merton, who published a seminal work within the field entitled *Continuities in Social Research* (Merton & Lazarsfeld, 1950). Within this volume, Merton & Kitt (1950:40) suggested that "there is a two-way traffic between social theory and empirical research", that empirical studies can assist in the advancing of social theory while social conditioning "defines the scope" of empirical research. Kuhn (1962; see also Billinge *et al.*, 1984)

contributed to the argument in the early 1960s by introducing the concept of 'paradigms'. Paradigms, he suggested, are "generally accepted set[s] of assumptions and procedures which serve to define both subjects and methods of scientific enquiry" (Stoddart, 1986:6). Paradigms create a context for scientific goals and procedures, but are sensitive to changes or 'shifts' as current practice is rejected in favour of more valued aspects of scientific order. According to Kuhn, the development of scientific knowledges occurs within a non-linear (episodic) progressive framework. Major scientific findings arise periodically and subsequent research expands on the prevailing theory until future revelations occur. Kuhn's proposal differs fundamentally from the notion of linear science, in which scientific developments progress gradually and rarely constitute radically new theorisation. However, the notion of episodic science highlights the key conception that science occurs within a widely accepted and socially-generated framework of theorisation.

A 'new wave' of sociological studies of science in the mid to late 1970s – reflecting postmodern ideology (Barnes, 1993) – established a polarisation between the two main schools of sociological thought. The Edinburgh research group was fronted by Barry Barnes (see Barnes, 1974, 1977), David Bloor (see Bloor, 1976) and Steven Shapin (see Shapin, 1982) and was particularly involved in the macrosocial study of the interests and knowledges of scientific groups, and discourses on the rhetoric of science. The Bath research group, led by Harry Collins (see Collins, 1985), focused more upon microsocial aspects of discourse and negotiation between individual scientists (Pickering, 1992). Whilst earlier sociological studies had been concerned with scientific practice and theory, the new wave of interest addressed the Sociology of Scientific Knowledge (SSK), the 'social or existential conditioning' of thought (Mannheim, 1954). Pickering (1992:1) outlines the fundamental ideology of the sociology of scientific knowledge:

> SSK insisted that science was interestingly and constitutively social all the way into its technical core: scientific knowledge itself had to be understood as a social product.

The development of postmodernism during the 1970s raised previously unquestioned issues concerning the nature of science. Scientific research had widely been considered "predominantly openminded, impartial and objective" and connected with such ideals as 'technicality', 'rationality' and 'impartiality' (Mulkay, 1991:62). However the newfound concern for liberation and otherness brought the desire to subject science to the type of sociological scrutiny previously restricted to studies of religious and philosophical disciplines (Knorr-Cetina & Mulkay, 1983).

The sociology of scientific knowledge is closely linked to concepts of social constructivism. Knowledge is rarely constructed from objective observation or fact, and science is no exception. Scientific data are not produced unambiguously, nor are they analysed and reported as such (Knorr-Cetina, 1981; Mercer, 1984). The sociology of scientific knowledge thus involves a recognition of the social content of science and its products. Indeed, Knorr-Cetina (1981:3) suggests that scientific products are socially constructed, hence that "most of the reality with which scientists deal is highly preconstructed, if not wholly artificial". Scientific practice and outcome may be reliant upon discourses between scientists. Resultant decisions are thus 'internally constructed'.

Knorr-Cetina & Mulkay (1983) have highlighted two distinct debates which surround developments of scientific theory, indicating the importance of subjecting science to sociological scrutiny. The first theory, the *thesis of the underdetermination of scientific theories by the evidence*, suggests that no scientific model or hypothesis alone is sufficient to interpret a situation, given the number of different factors involved. However, the adjustment of auxiliary hypotheses may enable the researcher to add more weight to the theory being applied:

> A theory whose predictions do not materialize can always in principle be retained by making appropriate adjustments in the auxiliary hypotheses. (Knorr-Cetina & Mulkay, 1983:3)

Furthermore, data may frequently be explained by several alternative hypotheses, the selection of which may be influenced by the social conditioning of the individual scientist.

Knorr-Cetina & Mulkay's second theory, the *theory-ladenness of observation*, suggests that all observations made by scientists are subject to the effects of individual understandings, perceptions, psychologies and categorisations. Scientific outcomes may be influenced by the "theoretical paradigm" (1983:4) within which observations are taken, and factors irrelevant to the current experimentation may be selectively discarded. Both Knorr-Cetina & Mulkay's theories cast significant doubt over the assumed rationality and impartiality of science. Latour & Woolgar (1979) add that there is no reason for the behaviours of scientists to be deemed more rational than those of social scientists or non-scientists (see also Knorr-Cetina, 1981). Such realisation has encouraged the questioning of traditional scientific values, practices, cultures and knowledge.

In "an effort both to penetrate the mystique of science and to provide a reflexive understanding of the detailed activities of working scientists" (1979:18), Latour immersed himself within a biological research team studying the chemical structure of thyotropin-releasing hormone (TRH). The aim of the two-year study was to observe and consider how scientists construct facts through their experimentation and discourse. Latour suggested that scientific decisions and discourses concerning experimental design and genesis were influenced by microsociological interactions amongst and between members of the research team. He concluded that the processes and products he had observed were thus intrinsically social constructions of science (Latour & Woolgar, 1979; see also Latour, 1987; Knorr-Cetina, 1981; Woolgar, 1981; Pickering, 1992; Rabinow, 1999).

Notions of social constructivism have brought issues of scientific concern and mistrust amongst publics to the foreground. The suggestion that scientific facts and theories are socially constructed as opposed to impartially and rationally generated has implications for the acceptance and belief of

findings (Bassett, 1994; Demeritt, 1998). Of particular relevance to geography is the uncertainty surrounding research into climate change and global warming. Demeritt (1998:175) notes:

> For climate change skeptics, the fact that atmospheric scientists must endlessly tune, correct and parameterize their global circulation models (GCMs) in order to represent the facts of future climate change provides a reason to dismiss the entire problem as a phantasmic social construction. (Demeritt, 1998:175)

Indeed, conflicting responses from scientists surrounding the issues of global warming and nuclear power have bred doubt amongst publics. Scepticism may have negative consequences for science disciplines.

Research documented within this thesis adopts a sociological slant in the investigation of a science-based subject: physical geography. The study may be considered to constitute a part of SSK through its investigation of the social and cultural influences upon formal and informal geographical learnings and individual knowledge constructions. SSK has rarely been applied to geography within research (Barnes, 1993), but sociological studies of perceptions are somewhat better established. Social constructions and perceptions of nature are of particular relevance to the study.

2.2.2.1 The social construction of nature

The cultural turn and the advent of humanistic studies in geography during the 1970s resulted in the emergence of a new approach to landscape study in geography (Kong & Tay, 1998). New ideologies followed similar patterns to the sociology of science, proposing that landscape perceptions are not, as was previously believed, wholly related to the physical nature of the environment. Instead, they may be influenced to some extent by the individual constructions of the perceiver, constituting a particular way of 'seeing'. The social and cultural conditioning of the individual may infuse and influence their appreciations, descriptions and interpretations of landscape, rejecting notions of the existence of a single 'true' observation (Forsyth,

1998). The new ideologies moved away from traditional "morphological approaches" to landscape study and explored the translation of landscapes into "metaphors of text and spectacle" (Gregory & Ley, 1988:115). Popular interpretations of landscape and the meanings attributed to place have been widely investigated within research (see Lowenthal, 1961; Cosgrove, 1984; Fitzsimmons, 1989; Penning-Rowsell & Burgess, 1997; Muir, 1999).

Social influences upon landscape perception may be individually or societally-generated (Mordue, 1999). Lowenthal (1961:245) suggests that there may be a basic conception of landscape – or a "shared world view" – common to all people which results from the fact that no individual is wholly isolated from external interactions or discourses. However, the shared view is subject to the influences of personal attributes including ethnicity, culture, class and gender (Blaut, 1980; see also Ortner, 1974; Avery, 1988) alongside individual experiences, knowledges and imaginations (Tuan, 1974). Landscape perceptions may thus constitute coalescences or 'cultural constructions' of social influence in combination with the physical reality of landscape (Cosgrove & Jackson, 1987; see also Appleton, 1975; Daniels & Cosgrove, 1987; Porteous, 1990; Whatmore & Boucher, 1993; Harrison & Burgess, 1994). Studies of social constructions of nature may permit an insight into the individual meanings, values and symbols attributed to particular landscapes or physical surroundings (Cosgrove & Jackson, 1987; Holmén, 1995).

Squire (1994:104) has investigated the meanings attributed to a particular landscape amongst visitors to Hill Top Farm, the home of the children's author Beatrix Potter in the Lake District. She determined that the landscape acted as "a catalyst for people to talk about a range of social and cultural issues, including ideas of childhood, cityscape and countryside, and authenticity and heritage preservation". For many adults, visiting the home and environment of Potter's literature unearthed nostalgic memories of childhood and represented the landscape of an idyllic past. Goodey (1986; see also Pettus, 1976; Wendling, 1989; Vosniadou, 1994; Swonke, 2000) highlights the role of different cultures in the construction of landscape

meanings and values, citing the example of a stereotypical English landscape perception:

> I have little doubt that the distant view of green, rolling, wooded hills with clusters of vernacular buildings, indicative of man's [sic] rooted, harmonious consort with time and nature, offer the greatest potential for peace and calm (Patience Strong calendars *passim*). In this sense there is an 'English Landscape Taste' which seems culturally transmitted and which is likely to be endorsed by the majority. (Goodey, 1986:84)

Within Dorset, the juxtaposition of the rolling green hills of English folklore and the dramatic and often barren coastline provides the potential for a variety of different landscape interpretations and meanings to be constructed amongst publics. The study of landscape perceptions within geography may be considered to employ both human and physical methodologies, representing the combination of sociological and physical (geomorphological) influences upon observation. Research within geography rarely incorporates such a combination of human and physical approaches and in this sense, the geography discipline is essentially divisive.

2.2.3 Division within the geography discipline

The division that exists between human and physical geographies may reflect the separation of the social and natural sciences as a whole. The fundamental distinction between social and natural worlds, according to Knorr-Cetina (1981:138; see also Mercer, 1984), is that "the latter does not constitute itself as meaningful". Social science is inherently different from natural science in that it involves "the assignment of a symbolic quality to social rather than natural life, and the attribution of an interpretative, dynamic and interactional quality – sometimes identified with hermeneutics – to social rather than natural science method" (Knorr-Cetina, 1981:138). Within geography, human (social) approaches to research arguably involve the primarily qualitative study of social, cultural and societal phenomena, as

distinct from the predominantly quantitative study of natural systems and processes adopted within physical geography.

Mercer (1984:161-2) suggests that the division between human and physical geographies emerged as a result of the 1960s quantitative revolution, which "set in motion a process leading to a serious (some would say healthy) cleavage within the profession between two opposing perspectives – on the one hand a *technocratic* orientation towards geography, and on the other, a *normative* or *prescriptive* slant, with humanistic roots". For many geographers, human and physical studies remained separated throughout the twentieth century. Research which crosses the boundaries of human and physical geographies is seldom undertaken and the division between social and natural worlds remains. "Academic geographers have reified the disjuncture between society and nature via the creation of a human and physical geography that rarely coexist" (Katz & Kirby, 1991:268; see also Moore, 1987; Guelke, 1988; Steed, 1988).

The past two decades have brought increasing calls for research to bridge the gap between human and physical geographies, with the recognition that the two approaches may be highly complementary and may combine to create relevant research which moves towards a deeper understanding of geography (Slater, 1982). One such area of research focuses upon the social construction of nature and the study of environmental perceptions and attitudes (Burgess, 1990; Unwin, 1992; Driver, 1994). In addition, concerns over human impacts upon natural landscapes and environments has forced the recognition that social and natural worlds cannot be separated: "many [geographers] do not understand that man [sic] cannot be understood without reference to his place in the biological scheme of things and to his environment" (Moore, 1987:253). The linking of human and physical geographies is a mechanism of addressing environmental problems which result from a combination of social and natural factors; for example global warming, deforestation and landscape degradation (Forsyth, 1998). It may also provide a framework within which to

address issues of the accessibility of science amongst publics (Katz & Kirby 1991; Crang 1996; Porritt, 2000*a*) and to investigate geographical knowledges and understandings.

2.3 Public understandings

A predominant theme of the research presented within this thesis is investigation into public understandings of geography. Understandings of geography have seldom been addressed within academic research and literature on the topic is thus sparse. Public understandings of science, however, constitute a relatively well-established arena for research and debate, and thus act as an important lead into the study of geographical understandings.

2.3.1 Public understandings of science

Since the Second World War, public attitudes towards science have changed dramatically (Gregory & Miller, 1998*a*). Baird (1968) suggests that in the decades immediately following the war, scientists were generally well respected amongst publics and it was not until concerns over the potential devastation of nuclear weaponry arose during the Cold War that the motivations of the subject were questioned (Bud, 1995). Today, the prevalence of negative and sometimes contradictory reports on science in the media and the secrecy surrounding issues such as industrial pollution and BSE have generated further concern and uncertainty amongst publics (see Bauer *et al.*, 1995; Irwin *et al.*, 1996; Wynne, 1996; Yearley, 1996; Porritt, 2000*a*). Scientists must justify their work to progressively sceptical publics in order to gain sufficient funding for research. Improving public understandings is considered a key route to the acceptance of science (Asimov, 1982; see also Wade, 1983).

In 1988, surveys within the UK suggested that scientific understandings amongst publics were generally poor. For example, only 34% of Britons were familiar with the concept of the Earth's annual orbit around the Sun, despite many respondents indicating that they were interested in science (Durant *et al.*, 1989; see also Michael, 1996). However, the recognition that individual constructions and knowledges are equally valid suggests that increasing public understandings of science alone would not be sufficient to justify the subject in the eyes of the individual. Instead, there may be a need to improve the accessibility of science and to forge more reciprocal relationships between scientists and publics.

The distance between science and publics has been explored by Macdonald (1995) within her study of visitor reactions to an exhibition on 'food' at the Science Museum, London. Macdonald determined that the majority of visitors understood and enjoyed the popular science information on display within the exhibition. However, due to their preconceptions of the complexities of science, many did not recognise that the display contained inherently scientific material (see also Rothman *et al.*, 1996). Visitors had a tendency to express scepticism and apprehension towards science in general, but rarely questioned the legitimacy of the museum display. Popular misconceptions of 'science' as complex and untrustworthy may thus cloud attitudes towards scientific content. Macdonald's findings support the necessity for research into the individual values and meanings attributed to science amongst public audiences.

Research into the Public Understanding of Science (PUS) developed considerably during the 1980s and 1990s (Hutton, 1996). The UK Committee for the Public Understanding of Science (COPUS) was established in 1986 as a joint venture by the Royal Society, the Royal Institution and the British Association for the Advancement of Science (Royal Society, 2000). The aims of COPUS were "to encourage and promote the public understanding of science (always including technology) and of its impact on society" (COPUS, 1992:3), in order to encourage public involvements in science, decision-making and policy formulation (Durant *et al.*, 1989; Evans & Durant, 1989).

Perceptions of involvement and awareness may reduce negativity and apprehension towards scientific activities (Asimov, 1982; see also Wade, 1983) and may steer increased numbers of young people towards careers in science, engineering and technology, areas in which young, dynamic interest is waning (Durant *et al.*, 1989; Wolfendale, 1996).

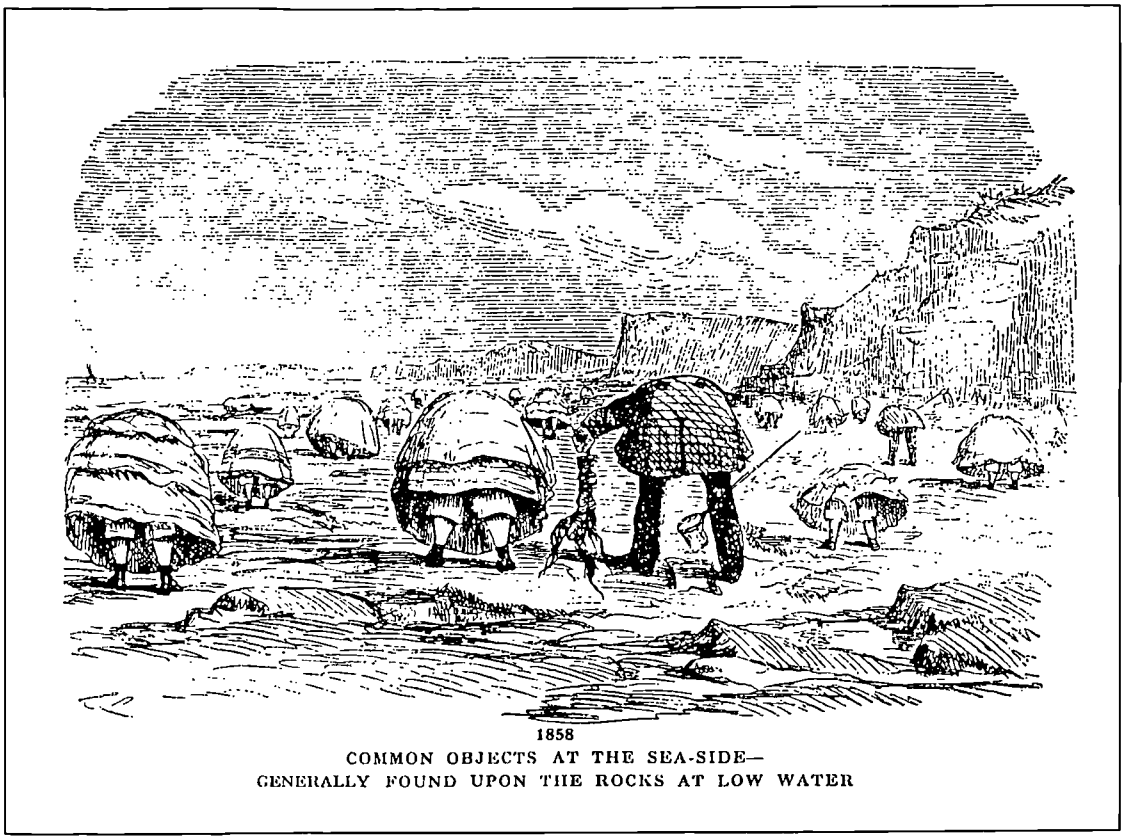
The attitudes of some academic scientists towards publics, however, have prompted criticism of the approach to research and policy formulation adopted by the Royal Society's COPUS initiative (Fitzgerald and Webb, 1994). Michael (1996:109) suggests that publics are often regarded by academics as a homogeneous group of people who essentially act as "repositories of information". This reductionist deficit model of publics portrays each individual as a 'vacuum' for knowledge reception, to be suffused with information. It takes no account of individual knowledge constructions and perceptions of science, nor of the implications of feedback between publics and scientists (Irwin *et al.*, 1996; McKechnie, 1996; Wynne, 1996; Gregory & Miller, 1998*a*). In reality the diversity of 'the public' is great, as is the nature of their scientific knowledges and alternative translations of science may be equally valid to those generated within academia. Michael (1996; see also Knill, 1998) suggests that the way that 'the public' is often perceived and treated by scientists may result in the establishment of non-specialists as 'outsiders' to science. Public Understanding of Science approaches may in fact reinforce the scepticism and mistrust of lay publics.

New approaches to studies of public understandings have emerged since the late 1990s to accommodate the recognition that 'the public' is a diverse body of individuals who may possess considerable and highly personal knowledges of science (Irwin & Wynne, 1996; Wynne, 1996). Recognition of the diversity of public audiences and of individual experiences, encounters and knowledges has prompted the coining of the term 'publics' within this thesis, to represent such variability. Failure to generate science-public interactions may frequently result from the specialist language employed by scientists. The accessibility of science may thus be questioned, giving rise to calls for the incorporation of popular values into

academic discourses. Publics are frequently interested in scientific issues perceived as having a direct relevance to them, and constructive developments such as new medical discoveries and technological advance may generate positive interests (Durant *et al.*, 1989). Bodmer (1994; see also Macdonald, 1995; Shibata, 1996; Knill, 1998) suggests that accentuating the enjoyable or 'fun' aspects of science may encourage participation and interaction amongst publics. Contemporary scientists frequently approach their subjects with intense gravity and sobriety which may be mistaken for arrogance. Using examples of cartoons taken from early editions of the popular magazine *Punch* which mock archaeology, geology and other sciences (see *Figure 2.i*), Bray (1981:228) suggests that "by renouncing the use of wit and humour in our writing, we [academics] are wilfully depriving ourselves of the most powerful weapons in the communicator's armoury" and an important approach to the popularisation of science. Recognition that the popularisation of science may be a key stage in the development of public understandings suggests that a similar relationship may exist within geography. Indeed, popular aspects of geography are widespread and constitute the focus of the following section.

2.3.2 The popularisation of geography

Cosgrove & Jackson (1987) document an acceptance amongst some academic geographers of the need for research into popular geographies, geographies "produced and used beyond the academy and other official knowledge institutions" (Crang, 1996:631). The recognition follows the acceptance of validity within alternative perceptions / understandings of science, and is particularly relevant within a discipline considered to have developed from popular routes. Geography was established as an academic discipline in the 1880s, but had been recognised as a subject for popular and school study for much of that century (Stoddart, 1986). An early form of geographical writing was the travel journal and exploration formed the basis of the early geographical tradition (Smith, 1987; see also Baker, 1931, Walle, 1996). Travel writing still holds widespread popular appeal through



1858

COMMON OBJECTS AT THE SEA-SIDE—
GENERALLY FOUND UPON THE ROCKS AT LOW WATER

Figure 2.i: Common objects at the sea-side – generally found upon the rocks at low water (Punch, 1858; from Dorset County Council *et al.*, 2000:151).

contemporary authors such as Bryson, Moorhouse and Palin (Burgess & Jenkins, 1989). Lowenthal (1961:242) suggests that the long history of popular interest in geography stems from the relevance of the subject to life and the environment, noting that:

> In their range of interests and capacities – concrete and abstract, academic and practical, analytic and synthetic, indoor and outdoor, historical and contemporary, physical and social – geographers reflect man [sic] generally. ... Anyone who inspects the world around him [sic] is in some measure a geographer.

The geography tradition provides a framework through which natural history may be studied and investigated. Burgess & Jenkins (1989) highlight the large audiences for popular geography in the form of books and television programmes on landscape, place and wildlife. National and local organisations may cater for popular involvement in geography, geology and archaeology. In Dorset, the Dorset Geologists' Association, the Dorset Natural History and Archaeological Society and the Dorset Important Geological Sites group all have extensive membership bases.

Lowenthal (1975; see also Cosgrove & Jackson, 1987; Burgess *et al.*, 1988) suggests that an approach to the engaging of publics in geography is through the attachment of meaning to the aesthetic appreciation of landscape. Publics may create associations between social and cultural experiences and landscape or place, for example links with nostalgic memories of childhood and past encounters (see for example Lowenthal, 1979, 1985; Shoard, 1981; Squire, 1988; Penning-Rowsell & Burgess, 1997; Mordue, 1999). Individuals may tend to show preference for familiar, 'natural' landscapes, and for environments which serve as a reminder of the past and 'old England' – even if these landscapes are in fact artificial. The question remains, however, as to whether the inherent geographical content of such landscape appreciations is recognised amongst publics. Mackenzie & White (1982; see also Wittrock, 1974; Gagné & White, 1978; Leat, 1997) have investigated interlinkages between memory and cognition and suggest that key, memorable experiences may assist in processes of affective learning.

The linking of aesthetic and memorable landscapes with notions of geographical knowledge may thus benefit developments of popular understandings of the subject and the forging of links between academic geography and its popular counterpart (Cosgrove & Jackson, 1987).

Popular geography is not entirely – or even primarily – concerned with the dissemination of academic geography (Crang, 1996). With competition from ever-increasing leisure opportunities, the popularisation of geography must focus upon those characteristics and features of the landscape most valued by non-specialist audiences. Driver (1992) suggests that the specific values of popular geography audiences constitute a relatively unexplored area of research. In particular, he suggests that three issues require further investigation. First, the ways in which publics consume and translate images of landscape and geography. Second, the 'presentation', 'representation' and 'misrepresentation' of geographical knowledges. Third, the ways in which publics "remake the symbolic geographies they are sold" (1992:35). Each of Driver's three recommendations for research are addressed within this thesis.

2.4 The landscape as a tourism resource

The characteristics of popular geographies are such that geographical encounters and activities frequently occur within leisure time. Changes in patterns of work and associated increases in individuals' leisure opportunities over the past few decades (Williams & Shaw, 1997) have resulted in the active seeking of more and diverse entertainment options (see for example Cloke & Perkins, 1998). Individuals may travel to areas of aesthetic and geographical significance during leisure time and tourism is thus a valuable framework through which the promotion of popular awareness and understandings may be broached (Ceballos-Lascuráin, 1996; Agarwal, 1997). Each year between 16 and 17 million tourists visit the Dorset coast for leisure purposes (Dorset Coast Forum, 1998*c*). As a result, this division of publics forms a key group for investigation within the study.

2.4.1 Defining the tourist

The term 'tourist' emerged in Britain at the outset of the nineteenth century. Ceballos-Lascuráin (1996:1) suggests that the term refers to "an individual who travels for the pleasure of travelling, out of curiosity". However, the diversity of individuals who partake in tourism suggests that it may be dangerous to employ a definition of 'the tourist' (Löfgren, 1999), which risks stereotyping variable experiences and encounters into a single discussion of the 'Tourist Experience'. Löfgren suggests that a middle-class dichotomy has emerged between perceived 'travellers' and the mass consumptions of 'tourists'. Greater value may be attributed to the experiences of travellers, with the term 'tourist' used as a somewhat derogatory comment on the nature of other leisure encounters (see also Ceballos-Lascuráin, 1996). As a result, individuals may become marginalized because of their holiday preferences. The validity of diverse touristic experiences should be acknowledged.

Urry (1990:1) suggests that preferences for tourism encounters may be dependent upon what he labels the 'tourist gaze'. He proposes that "part at least of that [tourist] experience is to gaze upon or view a set of different scenes, of landscapes or townscapes which are out of the ordinary ... we gaze at what we encounter". Tourists may strive towards the observation and experience of situations that differ from everyday encounter, influencing their choices of holiday destination. However, gazes may also be directed by tourism providers, who may determine the locations that individuals travel to and may influence what they see. Urry distinguishes between different forms of tourist gaze, primarily between 'collective' and 'romantic'. The collective gaze refers to the mass identical experiences of tourism arising from encounters such as the package holiday and the traditional seaside resort. In contrast, the romantic gaze encompasses tourism experiences in which the individual engages in meaningful aesthetic, nostalgic or spiritual interaction with the object of the gaze, often the landscape. Urry's distinction seems to relate at least partially to Löfgren's dichotomy of tourists and travellers; the diversity of tourism encounters should not be overlooked.

Waters (1967:59; see also MacCannell, 1973; Urry, 1990; Johnson, 1996; Williams & Shaw, 1997) suggests that "the average tourist is a collector of places, and his [sic] appetite increases as his collection grows". Tourists may accumulate destination 'capital' as they visit different places. However, the tourist gaze is not restricted simply to 'seeing'. Löfgren (1999) suggests that tourism is a 'whole body' experience, not restricted to merely gazing upon different sights and spectacles. Individuals may rest or exercise their entire bodies and brains. Tourism encounters involve the construction of different meanings and translations surrounding sights (sites) and experiences by different audiences. Tourism may also provide the opportunity to engage in geographical learning.

2.4.2 Trends in tourism

The changes in tourism which have resulted in a focus upon the search for unique and spectacular experiences amongst visiting publics (Fiefer, 1985; Urry, 1990), may be traced historically through an examination of the progressive development and specialisation of the British tourism industry. During the nineteenth century, the Industrial Revolution and associated urbanisation coupled with the establishment of a passenger rail service resulted in a major expansion of British tourism (Heeley, 1981; Williams & Shaw, 1997). Holidays by the sea afforded "a temporary respite from the rigours and monotony of everyday life" (Heeley, 1981:62; see also Urry, 1990) and the seaside resort was considered "*the* locus of leisure and tourism" during that era (Williams & Shaw, 1997). Tourism as an industry originated from the local government reform of 1884 to 1894 (Heeley, 1981) and enabled a focus upon the regional provision of tourism services (see also Chang, 1997).

The 1930s brought further expansion to the tourism industry with the burgeoning of the private motor vehicle trade (Dougill, 1935), marking the beginnings of a truly mobile society. Tourism spread along the coast encompassing locations other than the traditional seaside resort (Williams &

Shaw, 1997) and became essentially classless, involving all areas of society (Löfgren, 1999). Tourism advertising was extensive and usually produced in conjunction with the railway network, resulting in some early 'branding' or 'theming' of regions, attracting tourists to the delights of 'The Cornish Riviera', 'English Lakeland' or 'The Bracing and Breezy Yorkshire Coast' (Heeley, 1981; see also Urry, 1990; Hughes, 1996). Dorset was promoted as part of the 'Sunny South Coast'.

The 1950s, however, were the real heyday of the British tourist resort (Heeley, 1981). Williams & Shaw (1997:3) attribute this to the "increase in personal disposable income" and the "expansion of mass consumption". Mass tourism was epitomised by the Butlin's Holiday Camp with its holiday packages, daily itineraries and the infamous 'redcoats'. Weymouth in Dorset was the original south coast seaside resort, endorsed by King George III in 1789 (Tolhurst, 1999; Weymouth & Portland Borough Council, 2000). In the 1950s and 1960s, Weymouth was still at the heart of seaside tourism and contained both Butlin's and Pontin's holiday camps. However, the 1950s also saw the emergence of the first foreign air package holiday (Williams & Shaw, 1997), which ultimately signalled disaster for Britain's seaside resorts. In the 1960s competition was from European locations, but by the 1980s competition was global and mass tourism took off on an international scale. Seaside resorts had been considered highly fashionable during the 1950s heyday, but increased personal mobility resulted in the localisation or 'suburbanization' of the British resort, encouraging tourists to seek more unusual and exotic experiences (Williams & Shaw, 1997).

With the slump in British tourism, many areas that had previously been popular holiday destinations suffered economic decline and rising unemployment rates (Agarwal, 1997; Urry, 1997). No financial assistance was offered to resorts until 1965 because of the strong metropolitan bias to government economic incentive schemes (Heeley, 1981; Williams & Shaw, 1997). However, Countrywide Tourist Boards were introduced as a consequence of the 1969 Development of Tourism Act (Heeley, 1981; Agarwal, 1997) and have been instrumental in the broadening and

diversification of British tourism in an attempt to fight back against foreign competition (Urry, 1997).

Williams & Shaw (1997:6) note that within contemporary tourism, "a very different tourist product is being sought rooted in the myths of nature and heritage rather than in the bundle of activities offered by the traditional seaside resorts". British tourists have become 'footloose', actively seeking out different genres of activity and opting for experiences which are 'extraordinary', 'natural' and 'unique' (Agarwal, 1997; see also Fiefer, 1985). Urry (1990) suggests that the desire for individuality in contemporary tourism constitutes a reaction to the universality of collective mass tourism. A range of different 'contemporary cultural spaces' is now available to the tourist, including diverse encounters of towns and cities, museums and galleries, the countryside, coast and heritage (Urry, 1997). The British tourism industry has had to diversify to meet the changing demand and now focuses predominantly upon short breaks and second holidays (Urry, 1990), the search for the 'natural' and 'authentic' (Hughes, 1996) and upon the establishment of different types of specialist tourism.

2.4.3 Specialist tourism

Alongside changes in the characteristics of the British tourism industry, the role of the holiday has changed. Holidays once focused upon rest and recuperation, but individuals may now seek entertainment and amusement, and increasingly education or personal development. Children play a progressively important role within society and parents may actively seek holiday experiences with which to both amuse and educate their offspring (Bowers, 2000; Walsh, 2000). Changes in tourist ideals have had a considerable impact on the countenance of British tourism. Tourist Boards increasingly seek to offer experiences which are both individual and appealing. This has resulted in the coining of the term 'specialist tourism', involving the construction of packages of holiday opportunities focused upon a particular interest or activity.

Specialist tourism is hardly a new concept; Ceballos-Lascuráin (1996) documents that tours of features such as castles, gardens, cathedrals and museums gained popularity during the 1920s. Specialist tourism provides the opportunity for learning within an informal and inspirational setting (Prentice, 1993) and is thus highly relevant to this study and to the development of broadly based public understandings. 'Heritage tourism' and 'literary tourism' are two distinct genres of specialist tourism which are both well-established and popular. In addition, increased environmental interest and awareness has resulted in the expansion of the 'ecotourism' industry. In Dorset, the aesthetic nature of the geographical landscape resource has attracted visitation for centuries, but only recently have attempts been made to promote this stretch of coastline through the framework of specialist 'geo-tourism'. The following sections provide an insight into the different types of specialist tourism produced and consumed within the UK and beyond.

2.4.3.1 Heritage tourism

'Heritage' is defined by Crang (1996:437) as "a revalorisation of landscapes, often of the formerly everyday, by means of taking what was merely outmoded or obsolete and turning it into something that is valued as historic". Heritage attractions involve the reconstruction of localised and often mundane pasts, involving presentation and interpretation of the ways in which people and societies lived and worked. Heritage tourism may be considered the harnessing of cultural, historical and ethnic aspects of a place in order to attract tourism (Hewison, 1987; see also Chang, 1997). Light (1995) reports unprecedented levels of popular interest in heritage and the past during the 'heritage boom' of the 1980s. As a response, numerous heritage centres and museums were established. In the first six months of 1988 alone, £127.2 million was invested in British heritage attractions and restoration (Urry, 1990; see also Hewison, 1991; Corbishley & Stone, 1994). Urry (1990:105; see also Garrod & Fyall, 2000) suggests that demand for heritage tourism may be satisfied because "almost everywhere and everything from the past may be conserved". Attractions may incorporate topics such as day-to-day life, industry and mining, for example the open-air

museum at Beamish, County Durham and archaeology, for example the Maiden Castle site in Dorchester, Dorset.

The expansion of the heritage industry since the 1980s has been at least partially attributable to a widespread dissatisfaction with the present and nostalgia for the past. Urry (1990) suggests that the ugly and mass-produced buildings of the modernist era aroused nostalgic memories of an aesthetic past and a desire to conserve the relics it bequeathed (Urry, 1990). "Unease with the uncertainties of the present" (Johnson, 1996:552; see also Hassan, 1985; Hughes, 1996) may prompt idealised reflection on the past and attract individuals to sites of heritage interest (Prentice, 1993). However, Hewison (1987, 1991) suggests that nostalgia represents an idealised construction of the past which differs significantly from the authenticity of recall. He adds that nostalgia may glorify the past, creating "a perfect copy of a history that never existed" (1991:174). Hewison questions the educational value of heritage displays, suggesting that they may often neglect education in favour of entertainment:

> If we are to offer a past, in terms of a collection of objects and their interpretation, then we must attempt to maintain some kind of critical distance, as opposed to the depthlessness of heritage interpretation, and some ides of historical time. To that end the moral values of education must be asserted over against the production values of entertainment. (1991:176)

Hewison's views, however, have been rejected by other authors involved in heritage research. Mellor (1991) argues that Hewison has placed excessive emphasis upon concepts of nostalgia within heritage production. Whereas nostalgia is recognised to be a melancholic sentiment, tourists do not tend to visit heritage attractions in order to agonise over the past; they visit primarily for the purposes of entertainment and enjoyment (see also Garrod & Fyall, 2000). Urry (1990, 1991; see also Buchanan, 1989; Brett, 1993; Light, 1995) has further criticised Hewison for his rejection of the educational content of heritage attractions. Urry proposes the concept of 'edu-tainment', which represents the combination of entertainment and education existing within heritage displays:

> There is ultimately something condescending about Hewison's view that such a presentation of heritage cannot be interpreted in different ways, or that the fact that the experience may be enjoyable means that it cannot also be educational. (1990:111)

Education may not always be a primary reason for visitation amongst publics (Prentice, 1991; Garrod & Fyall, 2000), but heritage interpretation may promote understandings and awareness of history amongst visiting audiences as they enjoy the attraction (Buchanan, 1989; see also Urry, 1991).

2.4.3.2 Literary tourism

Squire (1988:243) defines literary tourism as "an intellectual kind of tourism, focused on the emotional recreation of literary inspired experiences with landscape and place". Popular understandings of past cultures and landscapes may arise from both classical and contemporary literature. Tourism stemming from a desire to experience the landscapes described in literature may be considered part of the expanding specialist tourism industry (Squire, 1994). Places are increasingly marketed through connections with literature, creating labels such as 'Hardy's Wessex', 'Brontë's Yorkshire' and 'Austen's Hampshire' which are used by Tourist Boards to promote literary tourism. Crang (2000) speaks of the country being 'carved up' by these literary associations.

Literature is essentially socially constructed (Pocock, 1981; Porteous, 1986) and descriptions of place or landscape may be infused by elements of an author's imagination. A recognition of social and cultural influences upon literary landscape description during the 1970s established a humanistic approach to literary study, the "interpretation of landscapes as repositories for hidden meanings of place, experience, attitudes, and values" (Squire, 1988:238; see also Kong & Tay, 1998). The author Thomas Hardy included extensive description of the Dorset landscape within many of his novels. Simpson-Housley (1988) has analysed such description through a humanistic

framework, suggesting that the landscapes evident within the literature were influenced by Hardy's "personal perceptual filter" (1988:269) and desire to create a suitable atmospheric setting for the novels and their characters (Birch, 1981; see also Drabble, 1979; Tolhurst, 1999). Birch (1981) and Settle (1984) suggest that social constructions within literature and the introduction of imaginary and fictional dimensions to description provide an insight into the personal experiences of the author.

The individual social (humanistic) input of the author to landscape description within literature, however, raises questions concerning the authenticity of literary and media tourism encounters. Tourists may experience 'real' landscapes through the medium of fictional narratives (Squire, 1994). Visitors to literary settings may thus experience an inauthentic representation of both the 'real' landscape and of the constructed setting. In Dorset, a considerable amount of literary tourism surrounds the life and work of Thomas Hardy. The Dorset County Museum includes extensive displays on Hardy, including the desk at which it is alleged he wrote many of his novels. Hardy's cottage, where the novelist was born, is also open to visiting publics. The Thomas Hardy Society has produced a series of detailed accompaniments for trails which explore the landscapes of Hardy's novels, incorporating geographical as well as literary descriptions.

A recent offshoot of literary tourism constitutes visitation related to popular media, including tourism based upon films and television programmes (see Tooke & Baker, 1996; Riley *et al.*, 1998). The widespread appeal of popular film and TV culture means that places which form the settings of film and drama productions may experience considerable increases in tourist visitation. Mordue (1999:631) notes an annual increase of around one million visitors to Goathland, North Yorkshire, since the filming of the ITV police drama *Heartbeat* began in the village. The filming of the BBC drama *Harbour Lights* has similarly encouraged a 20% increase in tourist visitation to West Bay in Dorset (West Dorset District Council, 1999). Visitors may extract meaning and value from experiencing the site of their favourite film or programme, constructing participation through "bridging

(dedifferentiating) the divide between the real and the imagined" (Mordue, 1999:641). However, Mordue has determined that visitors to the setting of *Heartbeat* often anticipate that their experiences of the village will be more reflective of the TV programme, signifying "a distinct and escalating clash between the supposedly fake representations and values of popular media and their consumers and the traditional 'authenticity' of the countryside and 'country people'".

2.4.3.3 Ecotourism

Ecotourism may often be confused with nature tourism (see for example Ryan *et al.*, 2000; Tokyo Institute of Technology, 2000), which refers to "all tourism directly dependent on the use of natural resources in a relatively undeveloped state, including scenery, topography, water features, vegetation and wildlife" (Ceballos-Lascuráin, 1996:19-20). Ecotourism is in fact a subset of nature tourism and is based upon concepts of sustainability and conservation of natural resources (Norris, 1992; Wallace & Pierce, 1996; Centre for Ecotourism, 2000). Whereas nature tourism focuses upon the activity and entertainment of visitors, ecotourism strives towards the attainment of broader objectives related to benefiting cultures and societies in places of visitation (Ziffer, 1989). The IUCN Ecotourism Programme (cited in Ceballos-Lascuráin, 1996:20) defines ecotourism as "environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features – both past and present) that promotes conservation, has low visitor impact, and provides for beneficially active socio-economic involvement of local populations".

The origins of ecotourism have been traced to the 1960s and 1970s, the era in which concerns for the environment became prevalent and were expressed through the conservation of endangered species and the valuing of nature (Ceballos-Lascuráin, 1996). The destructive characteristics of mass tourism encouraged a recognition of the importance of sustainability, conservation and 'alternative' or 'appropriate' tourism which was enforced

through legislation such as the 1997 *Berlin Declaration on Biological Diversity and Sustainable Tourism* (Tokyo Institute of Technology, 2000). Less developed countries became particularly favoured for ecotourism due to the undisturbed nature of their wildlife and habitats, with positive implications for both conservation and economy (Christian *et al.*, 1996; Hanning, 2000). Wildlife in less developed countries is often considered a significant economic asset (Durst & Ingram, 1988).

Despite focusing largely upon less developed countries, however, ecotourism has relevance to Dorset primarily because of its role in increasing the awareness and environmental understandings of local and visiting audiences (Walker, 1996). Drake (1991) highlights the potential for improved awarenesses to result in support for, and involvement in, conservation, corresponding with a fundamental aim of Dorset County Council's attempts to promote tourism based upon the geographical / geological landscape.

The search for new and exciting holiday experiences within contemporary tourism (Ceballos-Lascuráin, 1996) places increasing pressure upon the key objective of ecotourism, sustainability. Increased demand for nature-based holidays and a subsequent escalation in the number of ecotourism 'operators' raises doubts over the legitimacy of the ecotourism industry. The Tokyo Institute of Technology (2000) documents the emergence of ecotourism operators whose claims of sustainability or conservation are not maintained. Ecotourism has become commercialised, resulting in a 'monoculture' in which the exercising of conservation and tourism integration is practised without regard for the particular social, cultural and economic characteristics of individual locations. However, differentiation between 'real' and damaging or 'charlatan' ecotourism experiences is difficult (Hanning, 2000).

Ryan *et al.* (2000) further suggest that ecotourists are primarily motivated by the desire for enjoyable holiday experiences as opposed to any notions of sustainability or conservation. The real meanings and values of ecotourism have become subsumed under premises of consumption.

Following a study of visitors to Fogg Dam Conservation Area in the Northern Territory, Australia, Ryan *et al.* revealed that the majority of tourists visited the area for purposes of enjoyment, spectacle and relaxation. Visiting publics rarely acknowledged priorities of sustainability and conservation, despite frequently classifying their experiences as 'ecotourism'. Ryan *et al.*'s findings suggest that ecotourism has become popularly equated with other forms of nature tourism, endangering the particular values that it represents.

2.4.3.4 Geo-tourism

Like ecotourism, geo-tourism symbolises part of the burgeoning 'nature tourism' industry; incorporating tourism based upon a natural heritage interest, or more specifically, upon landscapes of geographical or geological significance. The Geological Society *et al.* (1994:233) suggest that "the natural beauty of the countryside is the biggest asset of the tourist industry" within the UK and geo-tourism may thus contribute to a further salvaging of British tourism.

The term 'geo-tourism' is relatively new, but the concept of geographically or geologically based tourism spans centuries. Barber (1980) has documented the development of popular interest in natural history and geology during the nineteenth century. She notes that the early nineteenth century was the era of the collector, with many amateurs – often women – making intricate collections of shells, flowers and fossils (see also McEwan, 1998). A particularly influential female collector of this era was Mary Anning, a Dorset-based fossil collector who made unprecedented discoveries of fossilised ichthyosaurs and plesiosaurs (Newth, 1994; Tickell, 1996) and sold ammonite fossils as part of the newly-established tourist trade in Lyme Regis.

During the mid-nineteenth century, the study of geology was dominated by conflict between religious and scientific discourses. Lyell's work on the south coast of England – including Dorset – contributed to his inherently scientific *Uniformitarian* theories which contradicted the doctrines of Christian *Creationism* and fuelled geology's new-found reputation as a

'dangerous science' (see also Cadbury, 2000; Dorset County Council *et al.*, 2000). Popular interest in geology subsequently diminished and was not restored until the publication of Charles Darwin's *Origin of Species* in 1859. The *Origin of Species* was based upon a totally new and radical theory of species evolution, which clearly supported and relied upon Lyell's theories, further contesting religious belief. However, Darwin's book was "the key that released the species deadlock and launched biological enquiry into a new era" (Barber, 1980:65). The first quota of 1,250 copies sold out on the first day of publication, and the Earth and Life Sciences were transformed (Stoddart, 1986). The rejuvenated interest in popular geology persisted throughout the Victorian era, as documented within John Fowles' Dorset-based novel, *The French Lieutenant's Woman*. The hero of the novel, which is set in Lyme Regis during the 1860s, had an amateur interest in palaeontology fairly typical of that period:

> He was at that time specialising in a branch of which the Old Fossil Shop had few examples for sale. This was the echinoderm, or petrified sea-urchin ... they are very beautiful little objects; and they have the added charm that they are always difficult to find. ... Perhaps, as a man with time to fill, a born amateur, this is unconsciously what attracted Charles to them; he had scientific reasons, of course, and with fellow-hobbyists he would say indignantly that the Echinodermia had been 'shamefully neglected'. (Fowles, 1969:50-51; see also Drabble, 1979)

McKirdy & Threadgould (1994:459) suggest that "not since the Victorian times has the study of geology and geomorphology fired the public's imagination".

Dorset was a particularly important region in terms of geological and palaeontological discovery during the Victorian period, being the location of significant early theorisation. Alongside Lyell, James Hutton, William Buckland and Henry de la Beche were all eminent geologists who studied the Dorset coast during the eighteenth and nineteenth centuries (Dorset County Council *et al.*, 2000). Several geological time periods, nomenclatures and international reference sections were named after the area (Ellis *et al.*, 1996),

most notably the Kimmeridgian and Portlandian eras of the Upper and Late Jurassic respectively (Dorset County Council *et al.*, 2000). *Figure 2.ii* depicts a monograph representation of a Victorian excavation in Durlston Bay, Dorset. The excavation was conducted during the 1850s under the supervision of the palaeontologist Samuel Beckles. Significant mammal fossil remains were recovered, the monographs of which are displayed within the Natural History Museum, London (Dorset County Council *et al.*, 2000).

Modern-day definitions of geo-tourism are fairly subjective. Hose (1996:211), for example, focuses upon the provision of a service for tourists and the implications for the earth sciences as a whole:

> The provision of interpretative and service facilities to enable tourists to acquire knowledge and understanding of the geology and geomorphology of a site (including its contribution to the development of the earth sciences) beyond the level of more aesthetic appreciation.

Conversely Edmonds (1998*b*:5), highlights the promotion and marketing of the landscape as the fundamental premise of geo-tourism:

> The promotion of a site or sites through the provision of information, activities or facilities relating to the geology or geomorphology of that area and marketed to the public in order to promote a better understanding and appreciation of the earth sciences through enjoyable and stimulating learning experiences.

For the purposes of this study, the broadest possible definition of geo-tourism will be adopted, including elements of both the examples cited above. Geo-tourism is considered to relate to the promotion of a geographical or geological landscape for the purposes of tourism but also encompasses the physical act of visitation, the meanings and values attributed to geological landscapes and activities by individuals, processes of informal learning and interpretation working towards wider understandings of geography and geology, and the implications of geo-tourism for landscape conservation.

Figure 2.ii: Scene of the geological discoveries at Swanage, Dorset: a monograph by Sir Richard Owen, 1857 (from Barber, 1980:223).

Current trends in tourism indicate that there is a potential market for geo-tourism. Ceballos-Lascuráin (1996) recognises the increasing desire amongst tourists to visit natural settings, resulting in the expansion of the nature tourism industry. There is also an increasing demand for 'activity' holidays, as distinct from the traditional 'sun, sea and sand' of 1950s resorts. Ceballos-Lascuráin maintains that the media play an increasing role in attracting visitors to particular locations, presenting a case for the successful promotion and marketing of an area for specialist tourism. The inherent difficulty of promoting geo-tourism as a leisure option, however, arises from the apparently low levels of interest in geography and geology amongst publics (see Clarke, 1991; Shaw & Matthews, 1998). Barker (1996) suggests that geography and geology could be marketed alongside other related interests, for example, landscape, wildlife, industrial archaeology or heritage to attract individuals with wide-ranging interests. Promotion of geo-tourism may thus increase awareness of the relevance and appeal of geography and geology amongst publics.

2.5 Informal learning

Prentice (1993) highlights the opportunities for informal learning which arise through specialist tourism encounters. Geo-tourism is no exception to this, and as such provides a setting for the development of improved awareness and understandings of geography amongst publics. Within Dorset, geo-tourism is focused upon the coastal landscape, but informal learning provision is catered for predominantly through the interpretation of heritage centres. The heritage centres formed the context in which the informal geographical learnings of interpretation audiences were investigated within research and the visiting publics encountered constituted one of the three groups of geographers studied, alongside the formal learnings of school and higher education geographies.

Informal learnings of geography are primarily achieved through interpretative means (Spencer, 1991). The origins of interpretation arguably

lie with the US National Park Service, which was established in 1916 and incorporates a fundamental aim of interpreting the natural environment for the benefit of visiting publics (Light, 1991; Markovics, 1994). The usage of 'interpretation', however, was not adopted until 1957 with the publication of Tilden's seminal volume, *Interpreting Our Heritage* (Light, 1991). Tilden defined interpretation as "an educational activity which aims to reveal meaning and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information" (1977:8). His definition represents an early subscription to the understanding that interpretation incorporates the individual translations and meaning-constructions of audiences (Hooper-Greenhill, 1999), rather than merely the dissemination of information from expert to non-specialist (Ford, 1975; Taylor, 1979).

Hooper-Greenhill (1999:12) highlights that since Tilden's original definition, the term 'interpretation' has taken on a dichotomy of meanings. "There is a major difference in emphasis between the way the words are used in hermeneutics and in the museum. In the museum, interpretation is done for you, or to you. In hermeneutics, however, *you* are the interpreter for yourself. Interpretation is the process of *constructing* meaning". Methods of information dissemination have been widely practised within interpretation, but the recent recognition of the benefits of participation and interaction in learning alongside the acknowledgement of the diversity of audiences for interpretation has encouraged a return to Tilden's original concept.

2.5.1 A diversity of audiences for interpretation

Keene (1989; see also Falk & Dierking, 1992; Borman, 1994) has produced a four-part division of audiences for interpretation (see *Table 2.i*). *Table 2.i* indicates the variable diversity of audiences for interpretation, ranging from individuals with high levels of interest and understanding, to those with significantly lower levels. However, the diversity of audiences even within these categories presents problems for the production of meaningful

and relevant interpretation for all publics (Prentice, 1991; Borman, 1994; Molyneaux, 1994; Hose, 1996). Audiences may become stereotyped within a category, often being perceived as a 'mass of general public' (Stevens, 1989). Dove (1998) suggests that individuals may detect condescension in interpretation, creating resentment and feelings of dissatisfaction. The classification within *Table 2.i* also appears to make blunt distinctions between the educated, interested and thoughtful audiences and the mass of general public, suggesting that the experiences and knowledges of the latter are in some way less valid than their 'more educated' counterparts.

1.	**Education groups**	Children and adults; captive audiences; used to structured, linear methods of learning.
2.	**Interested information-seeking non-specialists**	Responsive, appreciative and interactive; require little active encouragement.
3.	**Thoughtful adult non-information seekers**	Find interpretation intrusive & encroaching; prefer to experience place and without interpretation.
4.	**Mass of general public**	Often unaware of the importance or interest of sites; resistant to mixing education with leisure; not interested in interpretation.

Table 2.i: Keene's four-part division of audiences for interpretation.

Producing interpretative resources and media for a variety of audiences and interests is difficult. Taylor (1979:17) notes:

> Many, perhaps most, interpretative facilities fall into the trap of either aiming at the level of the provider (usually a literate graduate specialist) or reducing everything to the lowest common denominator which either offends by its banality or is bland to the point of being soporific.

To appeal to the interests and knowledges of a variety of audiences, Taylor (1979:17) suggests that interpretation should consist of a hierarchy of information complexities, ranging from "eye-catching headlines" to "in-depth follow-up studies". At the Children's Museum in Boston, interpretation is

provided on three levels aimed at the child, the adult, and for the adult to read to the child (Hooper-Greenhill, 1987).

As an alternative approach to interpretation, the development of interactive and participatory media maximises the role of audiences and enables individuals to make their own interpretations and derive their own meanings from the information displayed:

> It is more important to enable people to take understanding into their own hands and to develop through practice the skills of observation, comparison and deduction. (Hooper-Greenhill, 1987:43; see also Young, 1999).

Interpretation may be subjected to multiple translations by audiences, relating to prior knowledges, interests and experiences (Walle, 1996; see also Prentice, 1991; Stone, 1994*a*,*b*). Informal learnings may thus be considered a function of the subject matter being represented, the constructions of interpretation providers and the variable readings of audiences (MacCannell, 1992).

A fundamental obstacle to the provision of interpretation, however, lies with the difficulty of encouraging audiences to interact with the information and materials on display (Prentice, 1991). Stevens (1989) highlights the dangers of forcing interpretation upon visiting publics, suggesting that this may be detrimental to processes of informal learning. Individuals may prefer to admire the aesthetic value of a landscape or to enjoy themselves rather than seek opportunities to study (Ryan *et al.*, 2000). Interpretation should not encroach upon these valid experiences. Moscardo & Pearce (1986; see also Urry, 1991; Light, 1995) suggest that interpretation has an entertainment and a pedagogic role. Audiences may be more likely to develop knowledges from enjoyable interpretation experiences. Interpretation should thus relate to individuals' "everyday experiences, interests and concerns" (Fitzgerald & Webb, 1994:278; see also Hooper-Greenhill, 1987). Displays that focus upon science and technology without reference to the ways that they are

connected to everyday life may contribute to the marginalization of non-specialist audiences (Bourdieu & Darbel, 1991; Bennett, 1999).

2.5.2 Approaches to interpretation

Media for the purposes of interpretation may take on variable forms. Geographical landscape interpretation has traditionally been attempted through leaflets or books, nature trails, interpretation boards or panels (see for example Badman, 1994; McManus, 1996; Burek & France, 1998). Some personal preferences for traditional methods remain, for example Keene (1996; see also Page, 1994, 1995; Light, 1995) indicates support for on-site interpretation panels, suggesting that individuals may be more likely to assimilate information and question phenomena whilst physically experiencing the landscape. However, recognition of the diversity of audiences for interpretation and of the importance of personal interaction and active participation in informal learning has resulted in the establishment of visitor centres at sites of interest, offering guided walks and ranger services (Feber, 1987; Hooper-Greenhill, 1989; Spencer, 1991; Ellis *et al.*, 1996; Bradburne, 1998). The recent development of multimedia displays involving audio-visual and CD-ROM technology may further encourage audience participations in interpretation (Prentice, 1993). Within this study, research into the informal learnings of publics was approached through the media of heritage centres. Heritage centres, alongside another key theme of popular media culture, thus form the basis of the following subsections.

2.5.2.1 The role of the heritage centre in interpretation

The heritage centre was established as medium for the generation of informal interpretative encounters during the heritage boom of the 1980s (Light, 1995). Fundamentally, however, the heritage centre constitutes a derivation of the museum, one of the earliest forms of interpretation.

The history of the museum incorporates three major phases of development, at least partially reflecting parallel changes within science. At the turn of the nineteenth century, museums were "heterogeneous jumbles of 'curiosities' entirely devoid of methodical purpose or arrangement and containing anything from coins to corn dollies" (Barber, 1980:152). Modernisation and organisation of content occurred gradually throughout the nineteenth century and involved a move away from the predominantly curatorial and preservation role of the museum (Barber, 1980; Hooper-Greenhill. 1987; Stone, 1994*a*), towards a second phase of provision, the establishment of a museum service for visiting publics.

Bradburne (1998) suggests that museums are now entering a third phase, the establishment of a *'new generation' of displays which aim to* stimulate thought rather than communicate information, perceiving interpretation as a 'process' rather than a 'static knowledge' (see also Bud, 1995). The 1950s methods of display which kept artefacts at a distance and used textual panels as the predominant form of interpretation are being phased out (Borman, 1994). Emerging display techniques include less textual information, relying more upon audio-visual aids, interactive displays, models and reconstructions; the emphasis is upon participation and 'hands-on' (Borman, 1994; see also Moscardo & Pearce, 1986). Urry (1990:130) writes:

> 'Living' museums replace 'dead' museums, open-air museums replace those under cover, sound replaces hushed silence, and visitors are not separated from the exhibits by glass.

Museums reflect current trends within interpretation as a whole. The approach to information dissemination of traditional museums is no longer relevant in today's society (Bradburne, 1998) and instead, participation and interaction of audiences is encouraged.

The new generation of museum interpretation was gradually phased in during the 1990s but many smaller museums, for example the Dorset County Museum in Dorchester, are still in need of considerable updating. In Dorset at

least, the six coastal heritage centres, which focus upon the interpretation of the geographical landscape, wildlife and geology, were ahead of museums in terms of interpretation, having adopted a 'bottom-up', 'user-driven' approach to learning (Bradburne, 1998) since their introduction during the 1980s. Within heritage centres, audiences are encouraged to develop individual interpretations of information displayed and may interact with exhibits to generate understandings and knowledges. Heritage centres often employ countryside rangers to contribute to personal discourses and to organise educational activities and guided walks. In addition, heritage centres may adopt a popular approach to interpretation, creating clear links between the subject and contemporary cultures and accentuating the thematic relevance for visiting publics.

Heritage centres may have a number of advantages over museums due to the misconceptions often held of museum environments amongst publics, a legacy of the more traditional styles of interpretation used. Hooper-Greenhill (1999; see also Hood, 1983) notes that despite attempts to update museums, they may still be perceived as old and imposing, unwelcoming and intellectual. Museums may thus have low levels of visitation, especially amongst certain sectors of society. Hood (1983; see also Bourdieu & Darbel, 1991; Hooper-Greenhill, 1991) suggests that the typical museum visitor is a well-educated professional, is younger than the population on average, and may be active in other leisure activities and community groups. Amongst other publics, museums may be considered "one of the least enjoyable means of finding out about local history" (Merriman, 1991:119). In contrast, heritage centres may attract visitation from broad sectors of society. The lack of an entrance fee and the informal layout of heritage centres, coupled with the personal influence of rangers, creates a relaxed and intimate setting for informal learning (see McManus, 1989; Hooper-Greenhill, 1999).

Hooper-Greenhill (1987; see also Hood, 1983; McManus, 1991) stresses that audiences need to feel comfortable within informal learning environments. She suggests that museum visitation should comprise an enjoyable experience which allows for considerable social as well as

intellectual interaction (Hood, 1983; Feber, 1987). Social interaction is frequently actively encouraged within heritage centres. 'Touch tables' and displays may "encourage people to form clusters where they can maintain face-to-face contact" (McManus, 1988:40; see also McManus, 1987). Learning may not be the primary aim of heritage centre visitation, yet with the development of interesting, relevant and participatory displays, the opportunities for cognition arising from the experience itself are considerable:

> There is no high expectation about the transfer of 'knowledge' to the visitor; that he or she might come away 'knowing', for example, that angular momentum is the product of inertia and angular velocity. Nevertheless, the visitor may well have had the direct physical experience of the effect ... and can use this 'experiential base' either to coalesce previous experiences or as an element in future learning. (Feber, 1987:90; see also Merriman, 1991; Blais, 1999)

Endersby (1997:185) suggests that the new generation of museums has a "significant role in shaping popular understanding of science and thus in creating and sustaining the public's scientific conceptions (and misconceptions)" through the promotion of informal and lifelong learning experiences (McManus, 1989). The heritage centres along the Dorset coast may arguably strive towards the achievement of similar goals without incurring the misconceptions and prejudices that often surround museum visitation.

2.5.2.2 Popular media interpretations

Publics may additionally become informed about geography and the environment through the media. Television programmes on wildlife and travel are popular amongst publics, making substantial contributions to individual geographical knowledges (Burgess & Jenkins, 1989). Some environmental magazines such as *BBC Wildlife* are widely subscribed to by popular audiences. Specifically geographical magazines such as *Geographical* and *National Geographic* may attract a more specialist (amateur interest) readership (see Grayson, 1996).

A recent attempt to interpret the landscape through the medium of television has been made through the BBC documentary series *The Essential Guide to Rocks*, broadcast during 1998 and 1999. The programme focused upon geology and physical geography, introducing exciting and dramatic aspects of the subjects which were interpreted by young, enthusiastic presenters. The popularisation of geology and physical geography was attempted through the development of links with everyday phenomena. The differences between several rock types were demonstrated through comparisons with confectionery, resulting in the creation of such delicacies as 'sedimentary squares', 'lava toffee', 'pumice honeycomb' and 'metamorphic marzipan' (Grayson, 1998). The programme had positive reviews and was well accepted amongst publics, attracting viewing audiences of over two million people per programme (BARB, 2000). Similar attempts have been made to interpret other 'non-fashionable' subjects through TV media. Most notably, the Channel 4 documentary series *Time Team* employs a celebrity presenter to introduce concepts of archaeology in an attempt to generate widespread appeal. The programme attracts in the region of 3 million viewers per episode (BARB, 2000).

Neither *The Essential Guide to Rocks* nor *Time Team*, however, compares with the universal interest in dinosaurs generated by the recent and highly successful BBC series *Walking With Dinosaurs* (see Haines, 1999). This programme built upon technological developments in graphic animation and visual reconstruction to illustrate theories of how dinosaurs lived and the nature of the Earth at that time (see *Figure 2.iii*). The programme attracted over 15 million viewers per episode and prompted a great deal of comment concerning palaeontological reconstruction. The popularity of the programme was such that it has already warranted a repeat showing. The links between dinosaurs and geology / landscape provide an excellent opportunity for further interpretation.

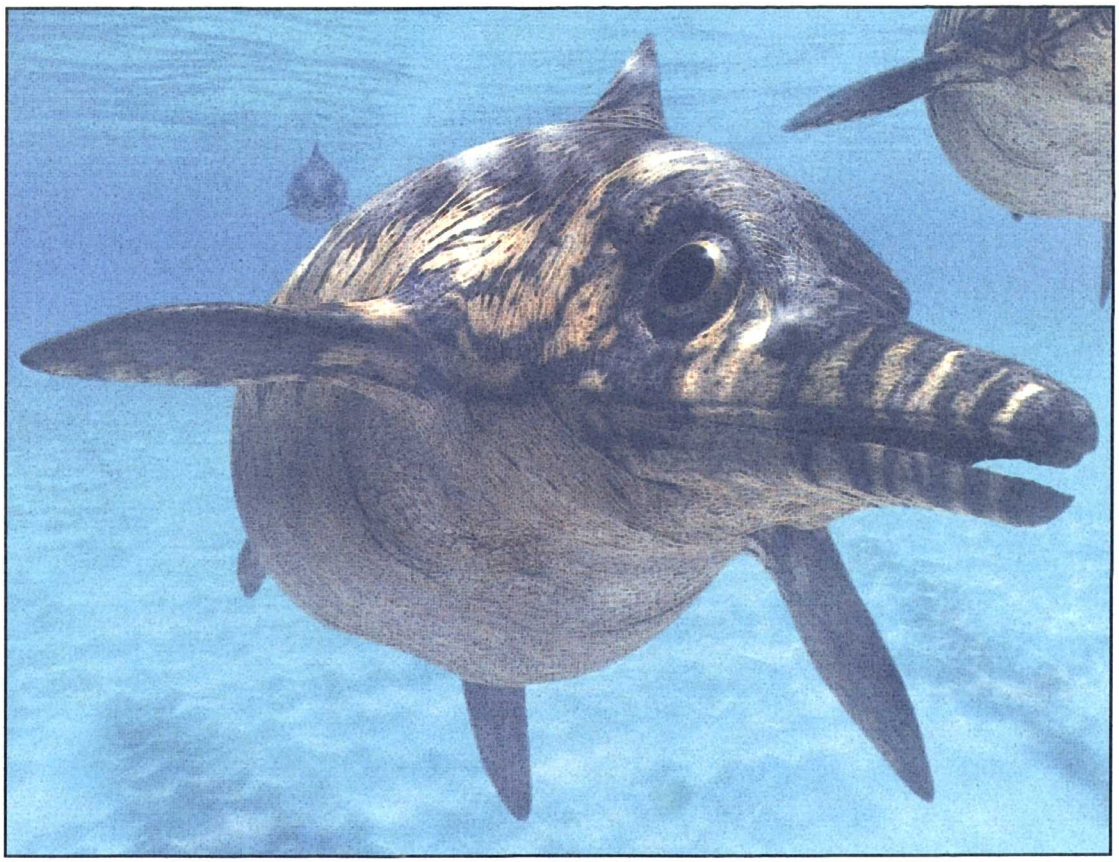


Figure 2.iii: Ichthyosaur reconstruction from the BBC series *Walking With Dinosaurs* (from Haines, 1999:124).

2.6 Formal learning

Within this thesis, study of geographical knowledge developments has been divided into the consideration of both informal and formal learning domains. Formal learning, the focus of this section, incorporates geographical education within schools and higher education, comprising the two remaining audiences for investigation. Informal and formal geographical learnings are similar in that both may focus upon the same landscape or resource, and both work to increase knowledges. Comparisons between the two learning domains are particularly applicable in the case of educational fieldwork, a compulsory part of the school curriculum and an important contribution to higher education degree courses.

The Dorset coast is a popular venue for geographical and geological field investigation (Dorset Coast Forum, 1998*a*). Fieldwork thus plays an important part in the synthesis of geographical learnings in the region and like tourism, makes a considerable contribution to the local economy. Links between children's geographical learnings and environmental awareness have been highlighted by several authors (see for example Lee & Myers, 1980; Palmer & Neal, 1994; Ballantyne, 1999; Kent, 1999; Seke, 2000), with further implications for the conservation of the geological and landscape resource. This section covers current issues in school and higher education geography, including fieldwork, the formal educational focus of the research.

2.6.1 Geography in school

The Geographical Association (1999) outlines four key aims of geographical education, set out in *Table 2.ii.* In addition, Catling (1999*a*,*b*; see also Lee & Myers, 1980; Ballantyne, 1999; Kent, 1999; Seke, 2000) suggests that geographical education encourages the development of transferable skills, the encountering of new experiences, the enhancement of motivations for learning and the foundations of an environmental awareness. The

importance of geography as a subject in school education is not disputed. Binns (1996:39) claims that "if education is all about developing knowledge, understanding and skills in literacy, numeracy, global awareness and international understanding ... then we already do all of this in geography". Burt (1989:154) adds that "physical geography is an excellent vehicle for teaching science: it deals with the kinds of everyday objects and issues to which pupils can relate". Recent inspections by the educational governing body OFSTED (1998), however, have highlighted that standards of geography teaching, progress and organisation in schools are weak compared to those of other subjects, bringing into question the ability of school geography to provide for an all-round education at the same time as introducing key and up-to-date geographical concepts and knowledges.

1.	To develop in young people a knowledge and understanding of the place they live in, of other people and places, and of how people and places inter-relate and interconnect; of human and physical environments; of people-environment relationships; and of the causes and consequences of change.
2.	To develop the skills needed to carry out geographical study, e.g. geographical enquiry, mapwork and fieldwork.
3.	To stimulate an interest in, and encourage an appreciation of, the world around us.
4.	To develop an informed concern for the world around us and an ability and willingness to take positive action, both locally and globally.

Table 2.ii: The aims of a geographical education (The Geographical Association 1999:164).

Geographical learning in schools has experienced dramatic change over the past thirty years. Prior to 1970, it focused primarily upon the study of regional geography and place (Unwin, 1992; Healey & Roberts, 1996), described by Binns (1996:40) as "'capes and bays' and rote learning of facts about world regions". During the 1960s, a quantitative revolution in geography saw a "transition from a 'pre-scientific' to a 'scientific' geography" (Billinge *et al.*, 1984:7). The 1970s, however, was the most dramatic period of innovation, with the introduction of the 'New Geography' to school curricula (Rawling,

1996*b*; Binns, 1996). Milner (1974) described the 'New Geography' as a shift from 'facts' to 'concepts', with the emergence of new theories and models (Unwin, 1996). Bale (1996) suggests that it incorporated a change from the study of the *differences* between places to that of the *similarities* between places, resulting in constructions of generalisations and models.

A further significant landmark in the history of school geography learning was the introduction of the National Curriculum for schools under the Education Reform Act of 1988 (Catling, 1999*b*). The National Curriculum signified a move towards a more centralised approach to school teaching (Williams, 1999) and ensured that geography was compulsory for all 5 to 16 year olds (Rawling, 1999). However, it was soon realised that the curriculum had been 'overloaded' and the level of content was unattainably high. The 1995 edition of the National Curriculum constituted a 'slimmed down' version (Bowles, 1999) and geography was no longer compulsory at Key Stage 4. Further changes occurred in 1998, with the new Labour government recognising the need for primary schools to dedicate more time to literacy and numeracy studies and instigating a two-year drive to kick-start improvements (Rawling, 1999; Slater, 1999). For this period, Key Stage 3 was the only level at which geography was both compulsory and assessed within schools, but non-core subjects including geography have now been phased back into primary school teaching.

Curriculum 2000, the most recently published National Curriculum for schools in England and Wales (DfEE, 2000), lists attainment targets for geographical learning at Key Stages 1 to 3. The targets establish an emphasis upon the thematic study of place at widening scales and within a broadening context, practical approaches to geographical enquiry and the study of pattern and process. Curriculum 2000 is a far cry from the descriptive regional geography of the 1960s, yet is still subject to criticism from several quarters. Lambert (1994) suggests that the school geography curriculum has a tendency to ignore recent advances in academic research, taking no account of the wider social and cultural implications of geography. He adds that it is highly regimented, disregarding the importance of individual teacher

perceptions and directions to study. Lambert argues that teaching geography within the constraints of the National Curriculum could "result in narrowing the learning experience of many children" (1994:73). Individual teacher perceptions and experiences can influence and benefit their presentations of a subject (Sanders, 1995).

Further criticisms of the National Curriculum arise from its 'check-list' format, which arguably results in the fragmentation of geographical learning. Teachers may complete individual topics without enforcing linkages between them or with other aspects of the school curriculum (Davidson & Mottershead, 1996; see also Mossa, 1995). Bale (1996) suggests that there should be less linearity within the curriculum, that themes and topics should be interlinked to create a matrix of learning rather than a compartmentalised list (see also Marsden, 1997). The recent 'slimming-down' of the curriculum allows teachers increased flexibility in teaching and has reduced fragmentation to some extent (Bale, 1996).

A measure of the success of the new school geography curriculum – at least amongst students – might be taken from the popularity of the subject at GCSE and A-level and its subsequent uptake as a degree subject in higher education. However, it is not easy to measure the popularity of the subject in the face of contradictory evidence, with authors documenting both the increasing and decreasing status of geography. Binns (1996:40), for example, claims that the popularity of geography in both schools and higher education has increased steadily since the turn of the last century and remains "very definitely 'live and kicking' in the schools of the 1990s". Hall (1996; see also Kent, 1999) adds that by 1994, geography had become the fourth most popular A-level subject, with over 46,000 candidates in that year. In contrast, Walford (1996; see also Daugherty & Rawling, 1996) suggests that the future of geography is not quite as secure as these authors have claimed. He predicts that the introduction of vocational courses such as the GNVQ as alternatives to the GCSE will affect both GCSE and A-level candidatures and consequently influence the number of applicants for geography higher education degree courses (see also Rawling, 1999; Slater, 1999):

> As the twenty-first century begins, geography may well be looking with some concern at a year-by-year decrease in the numbers who study it as a whole at all levels in education. (Walford, 1996:134)[1]

Bradford (pers. comm.) has already identified a decline in the number of students taking GCSE geography, with falls of 8.5% and 3.5% in 1998 and 1999 respectively. In addition, the Guardian newspaper (Woodward & Smithers, 2000) reported a decline of 11.9% in A-level geography candidature for 1999. Jenkins (1987) and Unwin (1987) claim that the position of geography as a subject is under challenge, primarily because of a lack of communication and coherence between different branches of geographical education. In addition, Unwin suggests that there may be a lack of competence within secondary school geography teaching; hence geography is frequently not made particularly interesting or exciting to students. Physical geography is the main casualty, with only a small proportion of the geography graduates who study for Postgraduate Certificates in Education (PGCE) specialising in the subject (Unwin, 1987).

The provision of a firm basis for geographical education at all levels may be improved through the concept of 'bottom-up' teaching, focusing upon adequate teaching within the primary school (Binns, 1994). Morgan & Storm (1989) claim that primary school geography is stronger in England and Wales than in any other country in the world, despite apparent contradictions from the 1998 OFSTED inspection reports. Whether or not this is the case, Binns suggests that the quality of geography in primary schools is improving. Primary geography has progressed from a focus upon the study of local environments towards encompassing distant places (Wiegand, 1999), enabling comparisons to be drawn (Catling, 1999*a*). Improvements in teaching and subject content ensure an increasing degree of motivation amongst pupils in terms of both geographical education and learning in general (Catling, 1999*b*).

[1] The effects of more recent changes to secondary geography, such as the new AS level and vocational A-level syllabuses introduced in September 2000, are yet to be seen (see Beckett, 2000; Woodward, 2000).

Despite Binns' claims that primary geography is improving, it is still subject to continuing criticism. Rawling (1996*a*) emphasises the small proportion of time allocated to geographical learning within primary schools. Core subjects of English, maths and science are allocated 60% of teaching time, whilst geography must compete with six other non-core subjects including history, art and physical education for the remaining 40% (see also Unwin, 1992; Catling, 1999*a*). Furthermore, primary school teachers are responsible for teaching the entire curriculum at this level and specialisation in geography is rare. Teachers may thus experience difficulties in developing interesting and informative programmes of study from the basic frameworks provided in the curriculum (Rawling, 1996*a*; see also HMI, 1989; Binns, 1996).

At the opposite end of the school scale, A-level geography has undergone significant changes in recent years. There are currently four examination boards in England and Wales, each offering geography as an A-level option. In 1982, the University of London Schools Examination Board (ULSEB, since renamed *Edexcel*) introduced a radically new A-level syllabus, the *'16-19'* syllabus. The '16-19' syllabus pioneered an emphasis upon decision-making, enquiry and the development of transferable skills in contrast to the factual bases of its contemporaries (Naish *et al.*, 1987; Chalkley *et al.*, 2000). It aimed to prepare students for everyday life and employment rather than solely for their progression to higher education (Birnie, 1999; see also Naish & Rawling, 1990; Kent, 1999), recognising "the needs of the vast majority of pupils who were never to go on to higher education" (Unwin, 1996:22).

The '16-19' syllabus rapidly gained popularity within schools, and by 1994 had the highest number of A-level geography entrants: 27.6% of total candidature (Hall, 1996) and over 12,000 candidates each year (Kent, 1999). As a result of its success, other syllabuses became more enquiry orientated, for example OCR's *Avery Hill* (Hall, 1996; Marsden, 1997; Birnie, 1999). Although the fundamental properties of the '16-19' syllabus remain, it has since been renamed the *Edexcel Geography 'B'* syllabus and is offered alongside the more traditional *Edexcel Geography 'A'* (Edexcel, 2000).

Despite its obvious popularity enquiry-based learning has attracted criticism from those who suggest that it has expanded at the expense of 'real' – and especially physical – geography (Marsden, 1997), creating a significant gap between geographical contents at school and academic levels.

2.6.2 Higher education geography

Geography was not established as a subject within universities until the late nineteenth century (Stoddart, 1986), signifying a move away from traditional geographical concepts of the military, exploration and travel towards a more science-based approach. Prior to its installation as an academic subject, geography was considered "vague and diffuse, part belonging to history, part to commerce, part to geology" (Stoddart, 1986:69). It was deemed appropriate for study only at amateur and school levels. Several 'Ivy League' universities in the US still do not offer geography degree courses after the subject was dismissed as 'not appropriate' for university study by the President of Harvard in 1948 (Smith, 1987; see also Holcomb & Tiefenbacher, 1989; Unwin, 1992; Bednarz & Peterson, 1994). In the UK, geography had to alter before it was accepted by universities, becoming more scientific through the adoption of 'geomorphology'. The study of the formation and genesis of landscape features by geographers was considered to be a significant intrusion into the subject content of geology, but was the mechanism by which geography became established as an academic discipline.

Contemporary trends in academic geography reflect those affecting higher education in general. The number of universities in the UK has almost doubled since the mid-1960s (Haggett, 1996; Daugherty & Rawling, 1996), particularly with the awarding of university status to polytechnics in the early 1990s (Bradford, 1996). An increasing proportion of school-leavers embark upon further study each year, including significantly more mature students (UCAS, 2001). Kent (1999) notes that 16,000 students study geography annually within UK universities. Pressure has recently been placed upon

higher education departments to satisfy external requirements in the light of the Research Assessment Exercise (RAE) and Teaching Quality Assessment (TQA). Healey (1997) predicts that the assessments will create a 'hierarchy' of institutions with differing degrees of focus upon teaching and research.

The geography discipline is also subject to specific problems which have materialised over recent years. The diversity of A-level geography syllabuses means that undergraduates' school learnings may have focused upon very different aspects of geography. As an attempt to resolve individual disparities, many academic institutions have adopted specific structures to their undergraduate programmes (Davidson & Mottershead, 1996; see also Jenkins & Healey, 1995), including a 'foundation course' in the first year of a degree programme to consolidate the geographical knowledges of students. Core subjects may then be taught in the second year and specialist options in the final year. Dyas & Bradley (1999) document a project at Liverpool Hope University College entitled *Geography for the New Undergraduate* (GNU). All new students must attend a compulsory series of seminars which aim to provide them with the basic geographical knowledges required for their degree courses, alongside written, oral and study skills.

Despite attempts to standardise the geographical learnings of undergraduates, many authors document problems of student progression between school and higher education geography (Goudie, 1993; Bradford, 1996; Rawling, 1996*a*). Daugherty & Rawling (1996:360) note that "there are many research developments in particular areas of geography, but few people trying to develop an overarching picture of the subject". School and higher education institutions may possess variable attitudes towards geographical education. For example, Daugherty & Rawling (1996) suggest that academic geographers may be primarily concerned with "advancing the frontiers of geography" and teaching specialist knowledges, whereas schoolteachers are more responsible for directing the broad foundations of geographical learnings.

2.6.3 Fieldwork in geography

A particular element of geographical learning at all levels is the fieldtrip. Fieldwork may be defined as an educational pursuit which occurs outside the school environment (Nairn, 1999). Ploszajska (1998:757) notes that "fieldwork is often taken to be synonymous with the study of geography" and indeed the origins of geography within the realms of exploration and travel (Smith, 1987; Foskett, 1997) would seem to support such a claim. Recognition of the significance of fieldwork to geography may be traced as far back as the 1870s, with Thomas Henry Huxley one of its early protagonists:

> For Huxley, geography was a matter of direct experience: it was to be learned in the village and the countryside, not read about in books. The field trip and the specimen were the means to knowledge, with the aim an understanding of the world in which we live. (Stoddart, 1986:47)

However, explorational and somewhat militant approaches to fieldwork whereby landscapes are overcome, mastered and tamed (Rose, 1993; see also Conrad, 1926) may be considered rather outdated. Geography fieldwork, especially in schools, is now concerned more with the benefits to learning and cognition of physical encounters with geographical landscapes, enabling the development of personal geographies and a sense of 'place' (Foskett, 1997). The current National Curriculum highlights the importance of 'direct experience', 'practical activities' and 'fieldwork' from Key Stages 1 to 3 (DfEE, 2000). Fieldtrips are often compulsory or highly recommended at GCSE and A-level, and within higher education geography modules may have a fieldwork aspect to them. The fieldtrip may also have a role in maintaining the popularity of geography as a subject. Ballantyne (1999:52; see also Ballantyne, 1998) notes that students "generally rate the opportunity of participate in fieldwork activities as one of the most liked aspects and important reasons for taking school geography".

Alongside movement away from the militant and explorational foundations of investigation, recent years have also seen considerable

changes in approaches to fieldwork and the teaching methods employed within this framework. Clark (1996:387) documents that fieldwork prevalent in higher education until the mid-1980s was based upon "observation and instruction", with considerable direction from teaching staff. The traditional fieldtrip is sometimes referred to as a 'Cook's tour' (Gold & Haigh, 1992; Fuller *et al.*, 2000; Stainfield *et al.*, 2000), as students are led from site to site and are inundated with information without having an active participatory role in the proceedings (Rees & Harris, 1973). Within such fieldtrips, students may be considered 'passive' learners and there may be no real distinction between the learning encountered in the field and that which occurs in the classroom or lecture theatre. Passive learning is not considered to be as beneficial to knowledge development or cognition as its 'active' counterpart. Pinet (1989:332; see also Higgitt, 1996) writes:

> Although the lecture format is a time-honoured technique of discourse, it suffers from a number of important drawbacks. Perhaps its most objectionable shortcoming is the propensity it has for allowing students to be passive learners, to listen with their *ears* rather than their *minds*. As educators, we strive to instil understanding rather than mere knowledge of ideas, an educational goal that requires active learning on the part of students.

The key to beneficial fieldwork thus lies with the development of an active learning experience (Lonergan & Andresen, 1988; Davidson & Mottershead, 1996; McEwen, 1996). Clark (1996:387; see also Bennett, 1975; Fuller *et al.*, 2000) states that active learning focuses upon "personal investigation and self-discovery", with fieldwork considered to be 'student-centred' – or independent – rather than 'staff-led'. Students may be responsible for their own learning through individual and group work (Newby, 1998). Actual investigation and enquiry takes the place of information dissemination (Dyas & Bradley, 1999; Foskett, 1999). Higgitt (1996) suggests that if students 'own' their learning experiences, they may extract greater benefits from fieldwork. Kern & Carpenter (1986:180; see also Carpenter, 1983) add:

> There appears to be a cause and effect relationship between the affective (ways of acting) and the cognitive (ways of thinking): an increase in the affective responses of a student toward or in a given learning experience leads to higher levels of motivation which, in turn, should result in improved learning.

Kern & Carpenter highlight the cognitive connections between active fieldwork experiences and processes of learning. Learning may be defined as "a relatively permanent change in behaviour potentiality that occurs as a result of reinforced practice" (Kimble, cited in Houston, 1986:4). Certain conditions affect the productivity of learning; Bruner (1988) names the three key influences of *action*, *imagery* and *language*. Experiential learning – and hence active, investigative learning – may be beneficial for education since it involves each of these factors (Foskett, 1999). The affective learning of fieldwork experiences may benefit student cognitive developments within the realms of both geography and general education. "Fieldwork pedagogies may have relevance far beyond narrow subject boundaries" (Nundy, 1999:190).

Although the benefits of fieldwork to learning and cognition are universally accepted, there has been a lack of comprehensive supporting research (Mackenzie & White, 1982; Prentice, 1991; Foskett, 1999; Smith, 1999; Fuller *et al.*, 2000). Evidence is generally anecdotal, restricted to that arising from teachers' experiences and governmental inspections. However, Kern & Carpenter (1986) have undertaken an investigation into the effectiveness of fieldwork amongst undergraduates at Southeast Missouri State University. They divided a class of undergraduate earth science students into two groups, both of which were provided with identical course materials. The teaching of one group was conducted in the field, but the other was taught entirely through laboratory-based work. At the end of the investigation, Kern & Carpenter found that although students from both groups had attained similar levels of knowledge, those who had been taught in the field possessed a greater ability to apply their knowledge to analysis and discourse. They concluded that the more experiential fieldwork approach

had "enhanced students' affective responses to the course and its content" (1986:182), resulting in higher levels of motivation, interest and enjoyment in learning. Fieldwork content within a course may result in improved test results and greater feelings of satisfaction and achievement amongst students (Spencer, 1990). Furthermore, students' experiences of fieldwork are "generally one[s] that [live] with them and on which they can continue to draw even after they have left college" (Burgess & Jackson, 1992:156).

The geography fieldtrip may have benefits in addition to those related to improved learning. Fieldwork experiences may provide opportunities for schoolchildren to develop their personal skills, including those relating to study and education, for example teamwork, communication, motivation and understanding (Smith, 1987; Clark, 1996; Nundy, 1999; Stainfield *et al.*, 2000) alongside those important for overall personal development, for example self-confidence, peer relationships and responsibility (Smith, 1987; Nundy, 1999). Clark (1996:386; see also Wass, 1990) notes that "fieldwork is beneficial in a broader educational sense in that it provides an opportunity for the development of personal and transferable (or enterprise) skills". Higher education fieldtrips may provide opportunities for bonding and relationship building amongst students (Allison, 1998). The juxtaposition of education and entertainment in fieldwork is also important in terms of its potential to increase students' awareness of the opportunities for leisure encounter within the natural environment, encouraging an interest in outdoor pursuit (Foskett, 1997).

Despite the obvious benefits of fieldwork and its emphasis within the National Curriculum, however, schools are increasingly reluctant to teach students in the field. Reluctance results primarily from factors such as expense, organisation and staff requirements alongside the fact that teachers may lack detailed knowledge on the sites or topics being covered (Hawley, 1996; see also Bowden, 1990; Clark, 1996; Ballantyne, 1999). Additional problems may arise from the recent reductions in grants available for school fieldwork and concerns about safety and pressure for schools to attain targets in education (Foskett, 1997; Smith, 1999). Similar grant reductions in

higher education geography departments have prompted McEwen (1996:380; see also Kent, quoted in Wojtas, 1997) to suggest that "if fieldwork is to maintain and enhance its status within the undergraduate geography programme, its educational value must be justified ... the 'value added' by fieldwork needs to be communicated effectively to students, staff and budget-holders".

To alleviate the emerging problems of fieldwork, Hawley (1996; see also Fazio & Nye, 1980; Palmer & Neal, 1994; Walford, 1995; Foskett, 1997) suggests that geography may be studied in areas local to the school. School grounds, local housing estates, town centres and cemeteries all constitute valuable locations for the teaching of key geographical concepts. The Earth Science Teachers' Association (ESTA, 1991) has produced resources to support local study, including ideas for geological trails. The local study may be effective in forging connections between pupil's everyday experiences and their geographical learnings, bringing the subject away from distant locations towards the reality of their personal geographies (Catling, 1999*b*; Wiegand, 1999). Local study may also be considered a return to the original school fieldtrip as documented historically by Ploszajska (1998:760). "Fieldtrips to parks and other public open spaces presented fewer financial and logistical difficulties, and by the 1890s were a standard supplement to classroom geography". Prior to the 1918 Education Act, there were no grants available to schools for fieldwork and residential trips were rare. Instead, students were taught in the locality of their schools.

Study in the locality of the school may be considered environmentally advantageous because it reduces pressure on key 'honey-pot' sites for geographical fieldwork. The Dorset coast has a particular problem with the overuse of honey-pot sites by educational groups. Lulworth Cove, Chesil Beach and Studland are all subject to problems of overcrowding, resulting in erosion and pollution. The popularity of the sites amongst schools and higher education may result from the fact that they are all cited as 'classic' examples of coastal landforms within textbooks, syllabuses and the National Curriculum (Edmonds, 1998*c*). The sites are not only representative of processes

included within curricula, but were also the locations of early geological and geomorphological discovery and theorisation (Barber, 1980; Cadbury, 2000). In light of the pressure on fieldwork sites, the Nature Conservancy Council (NCC, 1987) has called for improvements to the organisation and efficiency of educational trips. Fieldtrips may be beneficial to students if organised correctly, but if inappropriately managed are of little educational value and can cause serious problems at sites.

An alternative solution to restrictions on fieldwork involves the employment of Information Technology (IT) to enhance learning (Bale, 1996). Lemke & Ritter (2000) suggest that the Internet and IT significantly improve student motivation and enthusiasm due to the popularity of computer technology. IT may thus be used either to supplement data collection, or to enhance aspects of learning. For example, Davidson & Mottershead (1996) suggest that IT resources such as CD-ROM and data-loggers may be used effectively within the school grounds and local environments without incurring the financial costs of residential trips. Alternatively, Stainfield *et al.* (2000:256) highlight the potential use of virtual fieldtrips as "digital alternative representations of reality". Virtual fieldtrips focus upon the provision of observations and measurements without the need for visitation (see for example University of Leicester, 2000; West, 2000).

The use of IT resources within geography fieldwork is both convenient and effective, but there is little support for its use as a replacement for fieldtrips (Phipps, 2000). Lemke & Ritter (2000) suggest that students do not generally support the idea of IT superseding actual fieldwork or personal teaching and IT may thus be more successfully employed as a means of enhancing rather than substituting fieldwork in geography. Stainfield *et al.* (2000:260) add that "even if considerable effort and investment is made in creating virtual fieldtrips, they are likely to fall short of the real fieldtrip experience of learning in the field". "A virtual fieldtrip cannot communicate the awe of a spectacular landscape; the sights, sounds, and smells of the city; or the shared experience of a trip to the copper mines" (Gober, 1998:1-2). IT and the virtual fieldtrip is therefore no substitute for the actual experience of

fieldwork. It also has implications for learning in that it involves no memorable episodes or social interactions with which to enhance cognition.

2.6.3.1 Gender in geographical fieldwork

A particular issue relating to fieldwork in higher education – and to a lesser extent schools – is that of a 'gender imbalance' (McKendrick, 1996; see also McDowell, 1979; Lee, 1996). Research has revealed that female geographers are "under-represented in all areas of geography, at all career levels" (Dumayne-Peaty & Wellens, 1998:197). A similar gender imbalance has been recognised in the pure sciences since the 1970s (Mercer, 1984; Rennie, 1998; Brickhouse *et al.*, 2000) but it is only recently that it has been identified within geography (McEwan, 1998)[2].

Gender imbalances in higher education geography are confined predominantly to the realms of physical geography. McKendrick (1996) suggests that the imbalance may be related to gender issues within science, suggesting that because physical geography course requirements often include male-dominated subjects of maths and physics, female students may be deterred from pursuing physical geography at this level. Maguire (1998:213; see also Wojtas, 1997), on the other hand, has attributed the male domination of physical geography to students' perceptions of their personal fitness levels and of the fitness levels required to partake in physical geography fieldwork. Within her research, undertaken at Liverpool Hope University College, Maguire found that 22% of male students but only 4% of female students assessed their levels of fitness as 'high', concluding that:

> It is possible that women are less drawn to physical geography, partly because they feel they are not fit enough to participate fully in the fieldwork activities, and / or because they cannot compete and win within the framework established and perpetuated by male students.

[2] The male dominance of geography stretches back to the origins of the discipline. Bell & McEwen (1996; see also Stoddart, 1986) note that it was not until 1913, after a long and embittered debate, that women were finally admitted to the Royal Geographical Society.

Maguire's findings suggest that physical geography fieldwork may be perceived as a masculine and frequently 'masculinity-validating' experience (Dubbert, cited in Maguire, 1998). Physical geography was established as a male domain during the nineteenth century, when military discourses infused the field, establishing it as "a battlefield for personal and intellectual struggle" (McEwan, 1998:218). "Feminine roles and female role models were conspicuous only by their absence from most field activities" (Ploszajska, 1998:770). Exploration of the landscape was frequently equated with exploration of the female body (Rose, 1993) and resultant feminisation of landscapes created an inherently masculine gaze within fieldwork, perceiving nature and women as objects to be conquered and overcome:

> A powerful parallel existed between geographical conquest and sexual conquest: landscapes were feminized, penetrated, assaulted, conquered and subdued. (McEwan, 1998:218)

The tradition of masculinity within physical geography may go some way to explain the persistent gender imbalance within higher education fieldwork. Rose is critical of those physical geographers, for example Stoddart, who remain preoccupied with exploration and for whom fieldwork is still a heroic, masculine and somewhat militant experience.

Linked to persisting concepts of masculinity, physical geography fieldwork is frequently guilty of establishing conventions of behaviour and appearance, generating pressure to conform. Ridiculous feats of physical endurance ('chest-beating'), 'laddish' pranks and competitive comparisons of equipment may all abound within the fieldwork domain. Rose notes in particular the masculinity-validating activity of alcohol consumption, so often equated with the fieldtrip experience in higher education:

> Fieldwork also involved the necessary amount of drinking in order to prove how manly the fieldworker is; Stoddart subtitles a photograph of an eminent physical geographer lying on the grass in front of a building displaying a sign for Friary Ales as 'S.W. Wooldridge engaged in fieldwork on the Fernhurst Anticline'. Ho ho. (Rose, 1993:70)

Maskell (1999) describes the typical physical geography student as an 'outdoor hearty', a 'bloke', who 'bags' mountains and brags about his achievements. This stereotypical image, although extreme, may yet be substantiated within higher education departments up and down the country. The Durham University geography department, for example, has its fair share of 'chest-beaters' (see *Figure 2.iv*). Female students may often be relegated to the realms of note taking and data recording because their male counterparts consider them to be 'too weak' for the physical exertions of pit digging and sampling.

Gender imbalances within geography may thus be attributed to the lack of interest in physical geography amongst females in school education (McKendrick, 1996), reflecting the situation within science generally. The origins of the lack of female preference of physical geography, however, may be traced to the traditional masculinisation and male dominance of the subject within academic institutions during the late nineteenth and early twentieth centuries, resulting in the marginalization of the female geographer (Rose, 1993; Maguire, 1998; McEwan, 1998). Although particularly evident within the setting of fieldwork, gender disparities within geography may also be considered a significant link to the subsequent section, which focuses upon the 'gaps' which exist between different branches of geographical learning.

2.7 Gaps within geography: the variability of geographical encounters

The consideration of three distinct groups of geographers within this thesis – academic, school and popular – has resulted in the recognition that significant gaps exist between the different frameworks of geographical encounter. Several geographical authors have previously identified the gaps, yet research into them remains sparse. This section addresses the disparity between school and academic geographies, followed by a consideration of the gap between popular and academic geographies.

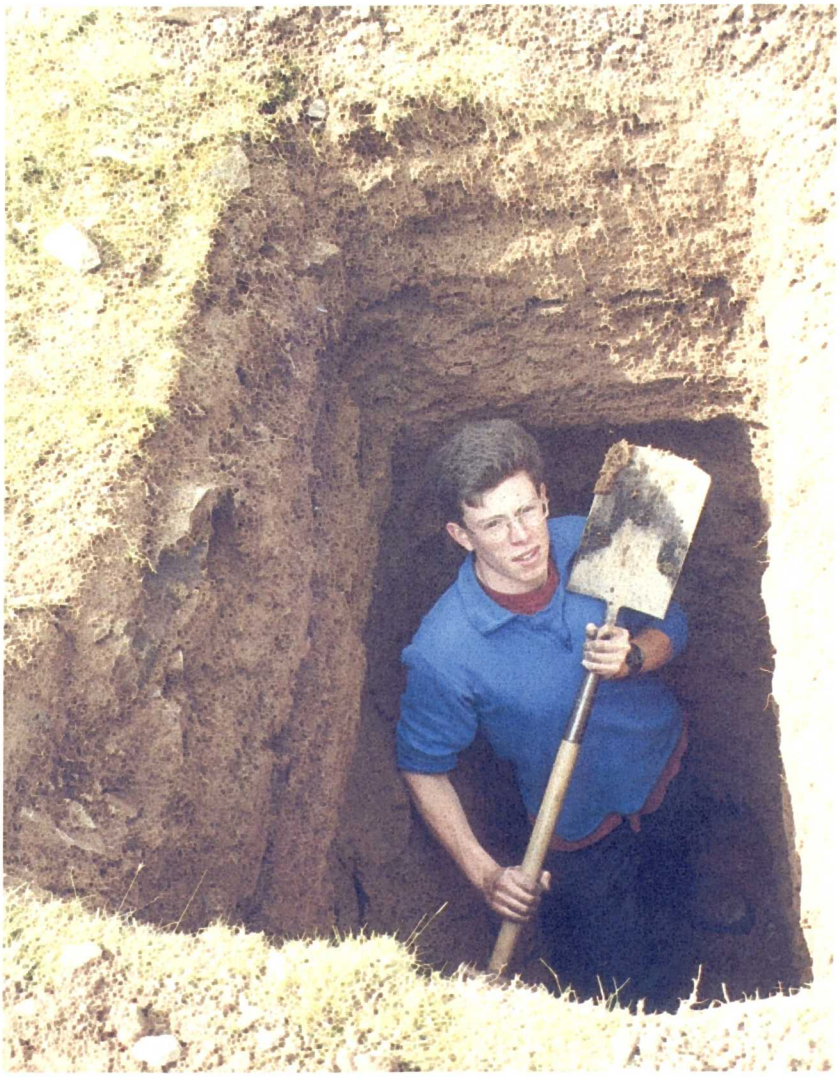


Figure 2.iv: 'Chest-beater'? A postgraduate student from Durham University's Geography Department at his field site in the Lake District.

2.7.1 The gap between school and academic geographies

Rawling (1996*a*) describes the 'growing discontinuity' between school and academic geographies, voicing concerns that if such discontinuity continues without the combined action of the two establishments, the whole future of geography as a discipline may be at risk. The source of the gap between school and academic geographies stretches back to the 1960s and 1970s, periods of great innovation and diversification within geography (Daugherty & Rawling, 1996). Early changes from regionally to quantitatively based geography in the early 1960s and the subsequent introduction of new concepts, theories and models towards the end of that decade were shared between academic and school geographers. Rawling (1996*b*; see also Haggett, 1996) describes the relationship between the two establishments during that era as "somewhat paternalistic". Academic geographers were involved in the production of school textbooks and the development of the school curriculum (Stoddart, 1986; Marsden, 1997); schools prepared students for higher education geography degree courses.

At the end of the 1960s, the geography discipline broadened further with the introduction of new approaches such as humanistic, welfare and radical geographies (Daugherty & Rawling, 1996). Schools were no longer able to keep pace with the rapidity of academic advances due to the significant burden of constantly adapting to the then new curricula and syllabuses (Naish *et al.*, 1987; Rawling, 1996*a*). Disparities in subject material were compounded by the communication gap which developed between schools and higher education. Academics who wrote text books for schools were frequently slighted by their research-based colleagues (Daugherty & Rawling, 1996; Williams, 1999; Monk, 2000). Goudie (1993) and Bradford (1996) implicate the role of the Geographical Association (GA) in accentuating the gap between school and higher education geographies. In the 1960s and 1970s, the GA was a forum for meeting and discussion between geographers of all genres, but higher education geographers have

increasingly detached themselves from the organisation and opportunities for dialogue have been lost.

In addition, Goudie (1993; see also Newby, 1999) mentions that the current need for academics to dedicate disproportionate amounts of time to advancing the frontiers of research is partially responsible for the gap between school and higher education geographies. The Research Assessment Exercise (RAE) introduced in 1988 has put enormous pressure on academics to publish their research findings (Healey, 1997), monitoring higher education departments through assessment of the research of their lecturing staff. Depending upon the amount and quality of research published, a department will be ranked on a scale of one to five (Williams, 1999). The scale has considerable implications for the finances of a department. Financial input to higher education departments is dependent upon a number of factors. Teaching funds are allocated in proportion to the number of students, with extra money emanating from self-funded and overseas studentships. Fees for research carried out under contract contribute to financial input. Teaching funds are capped by central government. However, the major negotiable element of the equation is the input gained by the department in consideration of its research output. The higher the RAE ranking of the department, the greater the funding allocated per research-active member of staff. Departments are thus under pressure to improve their RAE assessment rating, leaving staff with less time for non-RAE eligible activities (Jenkins, 1995; Healey, 1997). Departments are subject to yet further inspection and appraisal as a result of the Teaching Quality Assessment (TQA) introduced in 1992 (Gardner, 2000).

In contrast, Unwin (1992:15) attributes the widening gap between school and higher education geographies to factors at the level of school education, primarily the National Curriculum which he suggests "reflects a highly technicist view of geographical education" and "runs counter to much of the most exciting geographical research that has been undertaken in institutions of higher education over the past twenty years". Unwin argues that it is in fact the static nature of the curriculum that causes school

geography to lag behind its academic counterpart. The time, effort and financial implications of updating the National Curriculum to incorporate developments at the front line of geography are considerable (Rawling, 1996*a*). Selecting key inclusions to successfully reflect the changing research agenda and enforce links between schools and academia is equally difficult (Shaw & Matthews, 1998). Rawling (1999:276) suggests that the constantly changing nature of the National Curriculum and numerous government schemes to improve teaching may cause 'change fatigue' amongst teachers:

> The difficulties that teachers are experiencing with implementation, some of the unsatisfactory standards, the insufficient attention to professional development, the increasing gap with higher education – these are all symptoms of 'change fatigue'. They are a reflection that the subject community has been too busy at school level, struggling to implement nearly continuous changes to curriculum, assessment and school structures and, at national level, fighting battles over status and resource. There has been no time left for innovation or for subject updating.

Recent changes to A-level examination syllabuses have arguably contributed further to the disparity between school and higher education geographies (Daugherty & Rawling, 1996). The introduction of enquiry-based syllabuses, for example the *'16-19'* and *Avery Hill*, has resulted in a new generation of undergraduates who are unprepared for the impersonal, predominantly lecture-based teaching of higher education (Birnie, 1999; Bradford, 1996; Unwin, 1996). The importance of preparing students for both higher education and employment has been stressed (Unwin, 1996), but the very different 'educational contexts' of school and higher education remain (Daugherty & Rawling, 1996). Schools may focus upon the implementation of progressive pedagogical approaches and student-teacher interactions (Chalkley *et al.*, 2000) which emphasise the development of learning and investigative skills (Hooper-Greenhill, 1987). In contrast, higher education may focus more upon advancing the frontiers of academic knowledge (Newby, 1999). Rawling (1996*a*,*b*) suggests that fundamental aspects of recent academic research could be 'interesting and motivational' additions to the A-level syllabus, including popular culture, gender issues and geography

and landscape studies. However, the common aim and mutual understanding of a "commitment to geography as a vehicle for education" (Daugherty & Rawling, 1996:368) within schools and higher education may be considered a good starting point for attempts to (re)join the discipline.

There is evidently a need for the establishment of a 'deeper dialogue' between geographers in different branches of the discipline (Daugherty & Rawling, 1996). Higher education establishments rely upon schools for undergraduate intake, hence should take steps to reinvent academic-school relations and generate flows / exchanges of ideas instead of criticising the knowledges of first-year students (Goudie, 1993; Bradford, 1996; Crang, 1996; Rawling, 1996*a*; Unwin, 1996). Unwin (1987; see also Goudie, 1993; Bradford, 1996; Rawling, 1996*b*) adds that academics should attempt to develop an awareness of recent changes in school geography – both in terms of subject content and pedagogy – and should contribute to the development and progress of the curriculum.

In addition, Goudie (1993:339) suggests that schools should take an interest in developments within academia, including "access to new ideas, themes and techniques that can filter through to schools and add a new dimension to teaching". A knowledge of university requirements and teaching methods may assist in the establishment of a "continuous thread of geographic education" through schools and higher education (Rawling, 1996*a*:320) and "make the transitions, of students into higher education and of teachers into schools, as smooth as possible" (Daugherty & Rawling, 1996:363). Haggett (1996:17; see also Davidson & Mottershead, 1996) stresses the importance of maintaining and emphasising at all levels "some central and cherished aspects of geographical education: a love of landscape and of field exploration, a fascination with place, a wish to solve spatial conundrums posed by spatial configurations". This, he adds, will have the potential to "make more transparent the interfaces between school, college, universities and research institutes". However, indecision amongst academic geographers as to whether a core of geography actually exists and what it is comprised of make the realisation of such goals difficult.

An alternative route to the (re)connection of school and higher education geographies is through Newly Qualified Teachers (NQTs). Bradford (1996) has suggested that NQTs may possess first-hand experience of disparities between higher education courses and school teaching and are thus in a position to contribute considerably to dialogue on the subject. However, there has recently been a lack of geography graduates training for secondary school teaching (Unwin, 1987), to such an extent that financial incentives have now had to be offered to those undertaking geography-based PGCEs. The current poor image of teaching as a career, with low pay for a high-pressure, low support job, deters many graduates from embarking on teaching careers. As a result, establishing connections between higher education and school geographies through NQTs may prove unsuccessful.

2.7.2 The gap between popular and academic geographies

In addition to a gap between school and higher education geographies, considerable disparity exists between geographies encountered within popular and academic domains. The origins of such disparity stretch back to nineteenth century developments within science. Prior to the nineteenth century, science was very different to that which exists today. Documentation of the history of science indicates the existence of numerous amateur scientists, a focus upon natural history and considerably less complexity or specialism within the discipline. Communication was well established between the (professional) scientist and the (amateur) non-scientist (Hartman, 1997) and information and ideas were frequently collaborated. However, the nineteenth century resulted in the progressive specialisation of science. A considerable gap developed between expert and amateur scientists (Burnham, 1987), with a consequent closure of communication routes.

Geographical history at least partially reflects that of science. During the nineteenth century, geography was considered suitable for popular and

school study, but was not thought worthy of academic investigation (Stoddart, 1986). However, the eventual establishment of geography as an academic discipline at the end of the nineteenth century led to rapid specialisation which continued throughout the twentieth century, disconnecting geography from its popular roots. Contemporary academic geographers may refuse to acknowledge that geography exists outside the academy, suggesting that the geographies experienced by publics are not 'real' (Shaw & Matthews, 1998). Publics may have a tendency to view academics as elitist and arrogant, and to consider that their work is irrelevant to everyday life.

A number of academic geographers have recently undertaken research into the evolution of the gap between popular and academic geographies and into the possible solutions for the problems it creates. Shaw & Matthews (1998:368), for example, highlight and question recent concerns that academic research holds little relevance for popular concepts of geography:

> If penetrating, insightful and prospectively useful geographical work is produced within academia, why does it often have little in common with what passes for people's perceptions of the subject outside of university departments?

If the relevant and more widely applicable nature of geographical research is not recognised amongst publics, the implications for the future funding of academic departments are considerable (Unwin, 1987; Crang, 1996; Shaw & Matthews, 1998).

In terms of their personal experiences and encounters, publics may develop very different interpretations of geographies and environments to their academic counterparts. Penning-Rowsell & Burgess (1997:7) may highlight the variable understandings of nature and landscape, claiming that public understandings of geography are not necessarily based on "perfect knowledge, but rather on more heuristic rules of thumb about how the world really works". Burgess *et al.* (1988) refer to the values placed on environments, open spaces and encounters with nature amongst publics.

Such popular values vary considerably from the models, theories and concepts of geography produced within academia and suggest that there is not necessarily a lack of interest in geography amongst popular audiences, more a variability in the geographical knowledges and experiences encountered by academics and publics. Lowenthal (1961:243) notes that "the universe of geographical discourse, in particular, is not confined to geographers; it is shared by billions of amateurs all over the globe". The representations and interpretations of geography made by non-specialist publics are of equal validity and authenticity to those researched and produced within the academy. Indeed, popular representations may make a valuable contribution to geographical discourses, and dialogues between popular and academic geographies are important for the future progress, funding and stability of the discipline.

Traditionally, the view within academic geography (and science in general) has been that it is the responsibility of publics to take an interest in the work of the academy (Strachan, 1984). Shaw & Matthews (1998:367-8) argue that "perhaps the key to understanding the divergent conceptions of popular and academic geography, relates more to the fact that we [academics] frequently fail to make our work visible and accessible". The negative views of science and geography prevalent amongst publics are not helped by traditional models of 'the public' as inferior to the academy (Blomley, 1994). Recently, however, the value of generating interactions between popular and academic domains has been recognised.

Keene (1993) and Gonggrijp (1993) suggest that in order to improve the accessibility of geography, academics should dedicate more time to writing documents and producing discourses for the consumption of publics. "The degree of down-market penetration from the academic end of the spectrum is, it seems, very limited" (Keene, 1993:3). Mercer (1984:159) adds that academics may have a tendency to be somewhat short sighted in terms of seeing past the science which is produced within higher education departments:

> Undergraduate students, postgraduates and full-time academics in any given field are painstakingly initiated not only into certain methodological practices and theories relating to their discipline but that, much more importantly, they also tend to take on a particular set of fairly blinkered stereotyped attitudes and ways of looking at the world.

Only a minority of academics regularly take part in television and radio newspaper debates or publish literature suitable for non-specialist audiences. Such 'media dons', for example the geneticists Steve Jones and Richard Dawkins, provide significant contributions to the popularisation of academic science (Blomley, 1994).

Language is a key barrier to the accessibility of geographical knowledges within academia. Keene (1989) suggests that the majority of academic texts are inappropriate for most public audiences, being constructed in "a language which [makes] sense only to the cognoscenti" (Blomley, 1994:383). Billinge (1983) notes the often impenetrable style of academic writing which excludes those without specialist knowledges and contributes to the perception amongst publics that science is elitist and exclusive (see also Shaw & Matthews, 1998). Moorhouse (cited in Burgess & Jenkins, 1989:136) states, "I feel very strongly that a writer should not primarily be trying to impress the audience with his or her style".

Simpson-Housley (1988:270) suggests that academic geographers might learn from novelists, who frequently incorporate detailed geographical descriptions within their writings but do not marginalize non-specialist publics. Novelists' approaches to geographical landscape interpretation may be a key to the (re)connection of popular and academic geographies. Literary description may be accessible to publics not only in terms of the language and style adopted, but also because it recognises the validity and importance of individual interpretations and perceptions of landscape:

> Novelists' imagery is evident in the total structure of their works and in their local descriptions. An understanding of this emphasizes to geographers that landscapes have emotional significance that is not revealed in 'objective' scientific geography.

Bordessa (1988) emphasises the importance of combining "the geographer's factual description" and "the writer's flights of imagination" (Mallory & Simpson-Housley, 1987:12) within the construction of personal milieus. The creative writings and descriptions of literary authors and their positive reception amongst popular audiences stands in stark contrast with the barriers to popular understandings constructed by scientific authors.

Traditionally, scientific information has been provided for 'the public' through one-way 'deficit' models of dissemination. Hartman (1997:83) describes this type of model as one which "portrays studies of popularization to assume and measure a one-way flow of information from expert scientists to the lay public". 'The public' are assumed to automatically and unconditionally accept information provided to them by experts, and their levels of scientific understanding may subsequently be measured against fixed standards to determine levels of 'deficit' (Hartman, 1997; see also Gross, 1994; Blais, 1999). In recognition of the variability and influence of publics, an alternative, 'contextual' model is increasingly adopted (Bale, 1996). The model "assumes a two-way flow of information between scientists and the public, in which bridges of trust must be forged" (Hartman, 1997:83). Publics are considered influential in the production and consumption of scientific knowledges (Knorr-Cetina, 1981) and their translations and interpretations of science are considered equally valid to those of experts. Crang (1996:632) relates the contextual model to geography in the following way:

> Interrelations between the academic and the popular are ... crucial in understanding the constitution of the popular in the first place. We might approach these relations through concepts of nonacademic institutions and arenas. However, notions of popularisation need themselves to be understood as a particular imagination of these (dis)connections and translations between the scientific and the lay. At the least,

> they need to be reclaimed from any assumptions of a one-way traffic, in which scientific knowledge is just consumed by nonscientists. Rather, as most social-scientific accounts of science and its geographies now emphasise, science and its publics are mutually constituted through networks of interrelations. Networks in which scientists and publics are both actively enlisted and constituted in two-way relations.

Johnson (1986) has adopted the concept of a contextual model in the creation of his 'circuits of culture' diagram (see *Figure 2.v*). Johnson's model explores productions and consumptions of cultural experiences through cycles of communication and discourse between producers and consumers, including the translation and transformation of cultural meanings at each stage of the circuit. The 'circuits of culture' model provides a mechanism of investigating productions and consumptions of cultural discourses within a range of contexts (see Burgess, 1990; Squire, 1994; Norton, 1996) and highlights the importance of an integration and exchange of ideas between variable cultural actors.

2.8 Conclusion

The aim of this chapter has been to frame the contextual and theoretical foundations of the study. The inherently postmodern emphasis of studies into the sociology of scientific knowledge provides an overall framework for research. Sociological studies of geography are predominantly confined to considerations of perceptions and attitudes. This study contains elements of such undertaking, but the predominant focus is upon constructions of geographical knowledges, identified by Barnes (1993) as an area which requires further investigation. Focusing upon the development of geographical knowledges surrounding a primarily physical resource – the coastal environment of Dorset – the research may be considered to cross the boundaries of human and physical geographies, a venture which is rarely embarked upon.

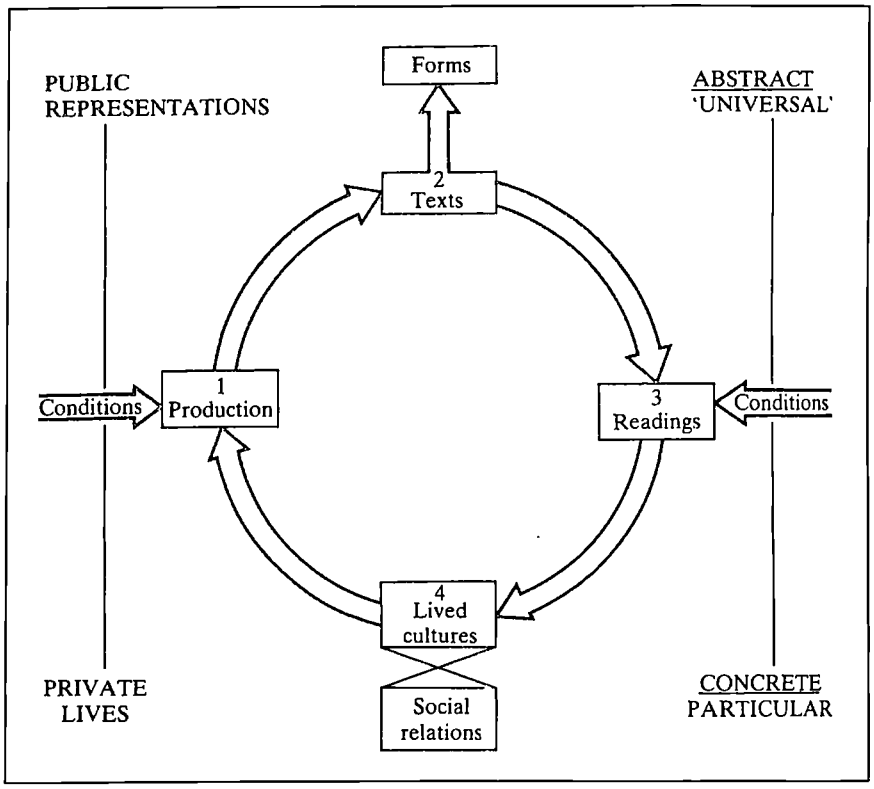


Figure 2.v: Johnson's circuits of culture diagram (from Johnson, 1986:284).

Within this thesis, research into geographical learnings and understandings is based upon the experiences and encounters of three distinct genres of geographical audience: the informal (popular) learnings of publics, and the formal learnings of individuals within schools and academia. Relationships between academic and popular audiences in particular create a strong link to studies of public understandings of science. Within such study, however, there has frequently been a belief that non-specialist publics are in some way inferior to academics. This research, in contrast, has a strong focus upon the equal validity and relevance of individual perceptions and constructions of geographical knowledges. Popular audiences for geography in Dorset are primarily formed from visiting publics, with between 16 and 17 million tourists arriving in the county each year (Dorset Coast Forum, 1998*c*). The informal learnings of popular audiences are thus investigated through study of the interpretative provisions of coastal heritage centres. In contrast, formal learning encounters are explored through the medium of educational fieldtrips. Fieldtrips represent the closest connection between formal and informal learning, often utilising the same sites and interpretative resources.

As a result of literary and contextual analyses, it was recognised that significant gaps, or disparities, exist between the geographical learning experiences of school, higher education and popular audiences. The disparities, predominantly resulting from poor communications and a failure to acknowledge the validity of alternative ('other') representations of geography, have created difficulties for the geography discipline. Problems have materialised in the form of declines in the numbers of students embarking on geography courses at secondary school and undergraduate levels (Bradford, pers. comm.; see also Unwin, 1987; Woodward & Smithers, 2000), failure amongst publics to recognise the relevance of geography within their lives or the value of geographical encounters (Clarke, 1991; Shaw & Matthews, 1998) and potentially negative implications for the future funding of geographical research within academia (Unwin, 1987; Crang, 1996; Shaw & Matthews, 1998). This thesis strives to uncover evidence of the existence

of disparities between different branches of geography through the consideration of the three audiences.

Johnson (1986) has proposed a 'circuits of culture' model which acknowledges the importance of interactions between the productions, consumptions and transformations of different cultural actors. Adaptation of Johnson's model such that it may be applied to the internal and interactional discourses of three disparate geographical audiences, may constitute a route to the (re)connection of geography. Kent (1999) highlights three goals which require particular attention within geographical research. First, to work towards the improvement of geography's image amongst publics. Second, to (re)establish communication channels between and within variable geographical audiences. Third, to link academic geography to developments occurring outside the realms of higher education. The application of Johnson's circuits of culture model to the study of geographical learnings and values conducted within this thesis makes at least some contribution to achieving the research goals set by Kent.

Chapter 3

Methodological Background

Chapter 3: Methodological background

3.1 Introduction: research in geography

Geography has undergone considerable changes in its approach towards research and data analysis over the past fifty years. Changes have revolved primarily around interchanges between two distinct methodological traditions. First, the quantitative method, based upon an objective, *positivist* approach to science. Second, the qualitative method or *interpretative* social science (Silverman, 1993). Differentiation between the two traditions takes several forms. Hunt (1989) suggests that whereas quantitative research relies upon formal techniques and instruments, the fundamental tool of qualitative study is the researcher. McCracken (1988:16) adds that "the quantitative goal is to isolate and define categories as precisely as possible before the study is undertaken, and then to determine, again with great precision, the relationship between them. The qualitative goal, on the other hand, is often to isolate and define categories during the process of the research". McCracken's distinction is supported by Walker (1985:3), who writes:

> Because qualitative techniques are not concerned with measurement they tend to be less structured than quantitative ones and can therefore be made more responsive to the needs of respondents and to the nature of the subject matter. ... Whereas the quantitative approach necessitates standardised data collection, qualitative researchers exploit the context of data gathering to enhance the value of the data.

Bogdan (1989:2) attributes the distinction between the qualitative and quantitative traditions not to properties of methodology but to their potential uses. He suggests that quantitative research may be employed within the factual and positivist study of the nature of social phenomena, yet the qualitative researcher "is committed to *understanding* social phenomena from

the actor's own perspective. He or she examines how the world is experienced".

Traditionally, quantitative methodology has been associated with research undertaken within the natural science discipline. Quantitative techniques may be employed in the scientific application of statistical or empirical models and laws, for example in the rigorous study and testing of the systems and processes of physical geography. The quantitative revolution of the 1950s and 1960s (Bryman, 1984; Morrill, 1984; Johnston *et al.*, 1986) was responsible for a significant expansion in this methodological tradition, resulting in a movement of techniques across to human geography. The suitability of quantitative techniques for human geography research, however, has come under question. Many social science authors suggest that the methods are inappropriate for the study of social and cultural phenomena:

> The fundamental differences between the natural and social worlds rule out the possibility of using the techniques of natural science to study social phenomena. ... The subject matter of the social sciences is intrinsically different from that of the natural sciences and ... it is therefore inappropriate to ape its methods. (Walker, 1985:11-12)

The suggestion that quantitative methods may be less appropriate for social science research is based upon the fact that unlike natural phenomena, humans are individual in ontological and epistemological terms. Walker (1985:13) suggests that "the objectivity demanded by a positivist model of social science is impossible to attain".

Questioning of the value of quantitative methods to social science and human geography research resulted in the re-emergence of qualitative and ethnographic approaches to research during the 1970s (Bogdan, 1989; Cook & Crang, 1995). Qualitative methods were traditionally adopted as precursors or supplements to quantitative analysis, but during the 1970s their credibility for social science research was recognised (Lindsay, 1997). Qualitative

research allows the consideration of diverse perspectives, experiences, attitudes and behaviours and may incorporate a variety of investigative styles (Coffey & Atkinson, 1996; see also Walker, 1985; Strauss, 1987). Coffey & Atkinson list numerous possible applications for qualitative research within the social sciences, including the traditionally qualitative fields of sociology and anthropology alongside educational research, psychology, media studies, cultural studies, human geography and nursing. Qualitative methods have been adopted within this project to analyse the encounters, perceptions and knowledges of variable geographical audiences. Johnston *et al.* (1986; see also Smith & Heshusius, 1986; Ley, 1992) suggest that qualitative study within social science may be supplemented with elements of quantitative methodology for purposes of data clarification. This research thus adopts a minor quantitative component to add contextual strength to aspects of interpretative analysis. Qualitative methodologies, however, constitute the primary approach to research and will thus be discussed in greater detail within this chapter.

3.2 Qualitative methodologies

> Qualitative research is deemed to be much more fluid and flexible than quantitative research in that it emphasises discovering novel or unanticipated findings and the possibility of altering research plans in response to such serendipitous occurrences. (Bryman, 1984:78)

The adaptability of qualitative research highlighted by Bryman is a characteristic which makes these methodologies particularly suitable for the study of diverse human cultures, societies and education. The basis of much qualitative research is the investigation of social and cultural phenomena through the interpretations of the individuals involved (Green, 1999). Interpretations may be analysed through variable conceptual frameworks which attribute meaning to qualitative findings. Cresswell (1998) describes five traditions (concepts) within which social science research may be grounded. First, *biography*, which interprets the life of an individual as the

central focus of the study. Second, *phenomenology*, which explores a single phenomenon and the experiences that it provokes. Third, *grounded theory*, the development of a theory based upon the categorisation and coding of field data. Fourth, *ethnography*, which investigates the contexts and roles of a particular social or cultural group. Finally, *case study*, the use of multiple sources of data collection to study a case or set of cases within a specific area or period of time.

This research project may be considered closest to the framework of ethnography. The experiences, perceptions and knowledges of specific socio-cultural groups or users – the formal, informal and popular audiences for geography within the setting of the Dorset coast – are studied, described and thematically contextualised. However, this study acknowledges a complementarity between concepts and procedures of ethnography and grounded theory. Ethnographic data obtained from qualitative study are subsequently interpreted through the framework of grounded theory. Grounded theory procedures involve the coding and categorisation of data to enable the development of theoretical perspectives on the diversity of interests and understandings surrounding a central phenomenon – here physical geography – within variable informant groups.

3.2.1 Ethnography

Ethnographic study first emerged within the realms of early twentieth century cultural anthropology, based upon comparative analyses of cultures and societies by authors such as Boas, Malinowski and Mead (Cresswell, 1998). Methods employed within cultural study were subsequently adopted and adapted by social scientists. Today, the scope for research within the ethnographic framework is extensive. 'Ethnography' may be applied as a general term to describe studies of a wide-ranging nature, but may refer primarily to interpretations of socio-cultural groups and cultural themes (Fetterman, 1989; Cresswell, 1998). Marcus & Cushman (1982:25) highlight that ethnographic studies "integrate, within their interpretations, an explicit

epistemological concern for how they have constructed such interpretations and how they are representing them textually as objective discourse about subjects among whom research was conducted". Ethnographic methodologies may be extremely adaptable. Fine (1993:274) suggests that "good ethnographers do not know what they are looking for until they have found it", that theory is "grounded in empirical investigation". In the face of such adaptability, the specific terms and frameworks of the study should be made explicit in order that its aims and intentions are recognised.

A key property of ethnographic study is the necessity for the researcher to immerse him or herself into the groups being studied, in order to encounter cultures first hand (Agar, 1986; Cook & Crang, 1995). Only with an extended period spent on a Kibbutz in Israel was Fetterman (1989) able to decipher and explain the cycles and patterns of behaviour and experience he encountered. However, immersion within a social or cultural group may create significant obstacles for the researcher. Problems arise primarily from issues such as gender, race, class and sexuality (England, 1994). For example, male researchers encountered difficulties in their dealings with young female informants during a study of a community centre for teenagers in Glasgow (McKeganey & Bloor, 1991). The researchers were unable to enter the bedrooms of female respondents, the private and secure spaces which had constituted the settings of enhanced communications with male informants. They thus faced a disparity in the quality of findings obtained from male and female respondents. Feelings of discomfort had affected relations between the researcher and researched, impacting upon the study as a whole:

> Throughout all this I felt distinctly uncomfortable as to how my being alone with a fifteen year old girl in her dormitory might be read by others. Somehow I think [she] was aware of my anxieties and was consciously manipulating me through them. (McKeganey & Bloor, 1991:205; see also Whitehead, 1986; Johnson-Bailey, 1999)

McKeganey & Bloor's example indicates the barriers which may exist between the researcher and the researched. Ethnographic research thus requires the development of considerable knowledges of informant cultures,

and the adoption of a sympathetic approach to investigation (see also Bastin, 1985).

In order to forge an affinity with the perspective of the informant, Fetterman (1989) emphasises the importance of maintaining an 'open mind' within ethnographic research. However, no researcher can remain wholly free of preconceived notions surrounding the groups or cultures he or she is studying (Scott & Usher, 1999; see also Wade, 1984; Maranhão, 1986; Cook & Crang, 1995). Preconceptions are frequently significant simplifications of a situation (Bogdan, 1989) and the subjectivity of ethnographic research may be criticised by those who strive towards an objective approach to science. Yet Cook & Crang (1995:11) argue that the subjectivity of research is fundamental to the validity of ethnographic findings. The construction of variable versions of 'the truth' within responses encourages the researcher to examine the diverse ways in which individuals "make sense of the events around them, and render these 'true' in their own terms". The existence of a 'double hermeneutic' (Giddens, 1976), whereby "interpretation is of necessity the researcher's constructions of other people's constructions of what they do" (Johnston *et al.*, 1986:381), drives the researcher to develop a more critical perspective within his or her study.

In summary, ethnographic research involves the prolonged study of groups or communities for the investigation of social interactions and cultural themes (Cresswell, 1998). Collection of qualitative data for ethnographic research typically involves methods of participant observation, but should not be limited to this method alone. Participant observation may frequently be employed in combination with in-depth individual interviews, focus group interviews and the study of documentation (Dey, 1993). Ethnographic studies frequently adopt more than one technique, constituting a *triangulation* of methods.

3.2.2 Triangulation

'Triangulation' refers to the use of a "combination of methodologies in the study of the same phenomenon" (Denzin, 1978:291). The origins of the term may be traced back to navigational techniques of locating a precise reference point (Smith, 1975) or to the principles of geometry:

> Given basic principles of geometry, multiple viewpoints allow for greater accuracy. (Jick, 1979:602)

Within qualitative research, the existence of diverse attitudes, experiences and values amongst respondents often necessitates a triangulation of variable methodologies for the verification and substantiation of data (Bastin, 1985; Hunt, 1989; Cohen *et al.*, 2000). Jick (1979; see also Denzin, 1978) documents a continuum of distinct forms of triangulation, ranging from simple through to complex or holistic designs. In its most primitive form, triangulation uses quantitative methodology to 'scale' a qualitative study, or qualitative field observation to strengthen statistical findings (see also Bryman, 1984; Walker, 1985; Ley, 1992). More complex and useful modes of triangulation take the form of either 'within method' or 'between method' approaches (Denzin, 1970; Sanders, 1995). 'Within method' triangulation involves the multiple application of a single method for purposes of cross-checking and consistency. 'Between method' triangulation employs several complementary methods in the study of a single research unit. Jick suggests that the most significant use of triangulation is in the form of "holistic or contextual description" (1979:603). The employment of multiple methods may reveal complexities and variances within data that single methods have overlooked, enabling a fuller and more detailed contextual description.

The benefits of method triangulation within ethnographic study focus predominantly upon the increasing of confidence in data findings, unearthing anomalous results and occurrences for investigation (Jick, 1979). However, to reap such benefits triangulation must be undertaken with adequate understanding and applied within the correct investigative framework. Coffey & Atkinson (1996) warn that the casual selection of methods to authenticate a

data set is not sufficient to validate the research, nor will data from various methodological sources automatically aggregate to produce a single representation of groups under study. "The combination or juxtaposition of different research techniques does not reduce the complexity of our understanding" (1996:14). Yet with the careful and intelligent selection of techniques for ethnographic research and recognition of the complexity of the groups and persons under study, a triangulation of methods make an invaluable contribution to research.

This study adopts a triangulation of ethnographic techniques both within and between-methods, with the aim of creating a "holistic or contextual description" (Jick, 1979:603) of the informant groups under study. The underlying approaches to data collection comprised participant observation and focus group methodologies which were employed alongside key informant interviews and quantitative / qualitative survey. Jackson (1983) suggests that the informality and flexibility of participant observation study should be supplemented through relatively structured data collection in the form of survey techniques. Key informant interviews, informal interviews and focus groups may make a similarly valuable contribution to ethnographic research. Supplementary methods may enable the researcher to "cross-check hypotheses generated by observation and perhaps to provide a better understanding of the context" (Walker, 1985:6). Within this study, each method was corroborated through triangulation. The adoption of both qualitative and quantitative methodologies followed Squire's recognition that individually, such approaches may fail to provide adequate data input within (tourism) research:

> The qualitative – quantitative dialectic in tourism research is artificial. A more profitable course is to explore how these different strategies may support and enhance each other. (1992:110; see also Mason, 1994)

The transient nature of tourists (and school groups) allows the researcher to form only a superficial relationship with informants during participant

observation studies. This method thus required triangulation for the investigation of geographical audiences.

3.3 Research in educational settings

The considerable contribution of educational groups to this study suggests that it is important for research in educational settings to be explored as a theme in its own right. A distinct set of literature deals with specifically educational research, and a diversity of approaches may be adopted (see Palmer, 1998). However, consistent with the methodological framework of this thesis, an ethnographic approach to research within educational settings has been adopted. The role of the ethnographer within education research forms the subject of this subsection.

3.3.1 The role of the ethnographer within education research

Within education research, the role of the ethnographer is to observe and make sense of the complex contexts of classroom and other educational settings. The variability of exchanges within educational settings may present difficulties for the ethnographic researcher. "While it is possible, for research purposes, to regard the classroom as a social unit in its own right, it is only with considerable difficulty that is can be regarded as self-contained" (Delamont & Hamilton, 1984:21). The researcher may be required to adopt a 'holistic' approach to educational study, whereby complexity is acknowledged and utilised as a framework for the specific focus of the research (Delamont & Hamilton, 1984; Fetterman, 1989; Marshall & Rossman, 1995). If the complexities of educational settings are not recognised and accepted, the validity, realism and representation of the research may be questioned (Scott & Usher, 1999).

Research within educational settings may generate discussion surrounding the ethics of ethnography. Adult-child relations and access to the

school environment constitute increasingly sensitive issues within education and research (Cohen *et al.*, 2000). Raffe *et al.* (1989:17; see also Davies, 1985) highlight the need for "openness, sensitivity, accuracy, honesty and objectivity" in investigation and the question of 'openness' is raised by many ethnographers within the realms of education. Burgess (1985; see also Fyfe, 1992) documents a study based upon participation in teaching within a UK comprehensive school. The researcher feared that admitting his primary motives as ethnographer (rather than teacher) might alter students' behaviours and attitudes towards him and affect the quality and validity of the research. Riddell (1989) similarly chose to disguise the fact that her research was primarily gender-related, deciding that such a sensitive issue might deter schools from allowing the research to proceed. Although the ethnographic framework suggests that participant observation should be approached in an inherently open fashion (Bogdan, 1989), these examples highlight particular situations in which a degree of dissembling is desirable, despite the ethical questions that this may raise.

The classroom constitutes the traditional and prevalent setting for education research, but alternative contexts do exist. This study focuses upon the opportunities for education which arise within the field, and explores the implications of fieldwork for geographical understandings and perceptions at all levels. The field has not been the subject of significant ethnographic research to date (Driver, 1999), but as school budget cuts, safety regulations and IT advances threaten the future of fieldwork such research becomes increasingly relevant. Educational investigation within this study focuses upon the formal geographical knowledges of school and higher education students, as distinct from the informal knowledges of popular audiences. For the study of each informant group it has been necessary to employ variable and overlapping qualitative techniques.

3.4 Techniques of ethnographic research

> The term *methodology* refers to the way in which we approach problems and seek answers. In the social sciences, the term applies to how one conducts research. Our assumptions, interests and purposes shape which methodology we choose. (Bogdan, 1989:1)

Bogdan suggests that the term 'methodology' refers to the ethnographer's approach to research. Qualitative study involves the employment of many broadly applicable methodologies (Dey, 1993), linked to the conceptual frameworks or paradigms of social science research. The appropriate selection and application of methodological procedures is important for the direction and progression of the study.

3.4.1 Participant observation

> The central method of ethnography is observation, with the observer immersing himself / herself in the 'new culture'. (Delamont, 1992:8)

3.4.1.1 Methodological background

The origins of participant observation as a key method within social science research may be traced back to the social anthropology discipline. Pioneering participative work was conducted by the anthropologist Malinowski, who spent two years residing in and studying the cultures and societies of the Trobriand Islands during the 1920s (Bastin, 1985). Parallel developments occurred within the urban research tradition of the Chicago School of Sociology, but the popularity of the method rose considerably following the quantitative revolution of the 1950s and 1960s. Much literature focuses upon the use of participant observation within remote and isolated communities (Cook & Crang, 1995; see also Delaney, 1988; Fetterman, 1989), yet it is equally possible and effective to study a social or cultural group with which the researcher is familiar – or perhaps even a member.

Participant observation is widely described as the defining methodology of ethnographic research (Cook & Crang, 1995; Marshall & Rossman, 1995). It is frequently employed in the study of social behaviour, meanings and interpretations and the impact of change or policy upon individual lives (Becker, 1958; Bastin, 1985; Marshall & Rossman, 1995). Definitions of participant observation are numerous and variable, but revolve around the central premise that the methodology "involves social interaction between the researcher and informants in the milieu of the latter, during which data are systematically and unobtrusively collected" (Bogdan, 1989). Descriptions of the methodological process frequently focus upon the physical and emotional immersion of the researcher into a socio-cultural setting and highlight the significant length of time that the method involves (see for example Whyte, 1979; Jackson, 1983; Fetterman, 1989; Hunt, 1989). Bryman (1984:78) suggests that the key to participant observation lies in "the ability of the participant observer to get close to his [sic] subjects and so see the world from their perspective". Jackson (1983:44) emphasises the importance of the researcher's ability to "transcend the epistemological gulf between 'insider' and 'outsider'".

The flexibility of participant observation may account for its popularity as a research method within social and cultural studies (Becker, 1958; Bogdan, 1989; Fyfe, 1992). Unlike quantitative inquiry, within which hypotheses are set prior to the outset of research, rigid frameworks to investigation are avoided within ethnography. Few distinct rules construct prescriptive guidelines for the technicalities of participant observation research; specifications are left primarily to the individual requirements and preferences of the researcher (Fyfe, 1992). Jackson (1983:45) notes that the "units and boundaries of [participant observation] inquiry are as little predetermined as possible" and research questions or themes for investigation may emerge as the study progresses (Bogdan, 1989). Processes of 'theoretical sampling' may be adopted in the selection of sampling points and settings as progressive themes emerge from the data (Glaser & Strauss, 1967). Sample selection should continue until 'theoretical saturation' is reached and no new themes are revealed.

Despite the acknowledged flexibility of participant observation as a methodological technique, uncertainties exist as to the correct interpretation of the process due to an apparent ambiguity within its name. Maranhão (1986:298; see also Tedlock, 1991) suggests that participant observation is, in fact, "an outright ambiguous concept, because participation entails a distancing from observation and vice-versa". Participation and observation may thus be unable to coexist within a single methodology, with researchers having to either participate or observe. Walker (1985), however, suggests that the ambiguity in terminology represents the crux of the participant observation methodology, which involves both 'involvement' and 'detachment'. Bastin (1985) adds that the roles of participant and observer may be complementary to one another. 'Subjective' and 'objective' roles of participation and observation may be interpreted in such a way that enables the development of "intersubjective understandings between researcher and researched" (Cook & Crang, 1995:21).

The recognition of a distinction and yet complementarity between the roles of 'participant' and 'observer' enables the researcher to vary the degree to which they assume each role within the informant community. A continuum exists between the 'complete participant' and the 'complete observer', incorporating conditions of 'participant-as-observer' and 'observer-as-participant' (Walker, 1985; see also Gold, 1958; Jackson, 1983; Marshall & Rossman, 1995). Each stage has been defined by Cohen *et al.* (2000:310-311) within the following extract:

> The 'complete participant' is a researcher who takes on an insider roles in the group being studied, and maybe does not even declare that she is a researcher. ... The 'participant-as-observer', as its name suggests, is part of the social life of participants and documents and records what is happening for research purposes. The 'observer-as-participant', like the participant-as-observer, is known as a researcher to the group, and maybe has less extensive contact with the group. With the 'complete observer' participants do not realize that they are being observed.

Walker (1985:6) suggests that the assumption of variable conditions by researchers depends upon the specific circumstances of the study and its setting, with levels of participation and / or observation resulting in "varying degrees and types of insight". The researcher should strive towards a desirable balance between participation and observation, as "too much participation and one is in danger of losing objectivity or of 'going native'; too much observation and one is accused of cold detachment, of not being able to capture or render the feel of the place" (Delaney, 1988:293; see also Miller, 1952; Vidich, 1955; Jackson, 1983; Fetterman, 1989; Tedlock, 1991). The degree of participation or observation adopted within a study should be made explicit for interpretative purposes.

Further uncertainties surrounding processes of participant observation arise from the relationships between researcher and informants (Becker, 1958:654-5; see also Fine, 1993). Invalidity may arise from three potential sources. First, "the credibility of informants", the possibility that the informant has reason to offer false information or to conceal the truth in some way. Second, "volunteered or directed statements", the affording of different data by the informant in the absence of the researcher. Third, "observer-informant-group equation", the fact that the informant may respond differently in the presence of other respondents. The gender, age, class and race of the researcher alongside factors such as sociability, approach and research experience may affect perceptions of the researcher amongst informants, influencing the data disclosed. One researcher may have more success within a particular setting than another, purely as a result of informant perceptions (Agar, 1980; Delaney, 1988; Cook & Crang, 1995). Bastin (1985; see also Fetterman, 1989) notes that researchers may frequently build up more rapport with some members of an informant group than others. Focusing a study upon these individuals alone may generate false conclusions concerning socio-cultural groups. Within participant observation research, sources of invalidity and their possible effects upon analytical findings should be investigated or at least disclosed.

3.4.1.2 Methodological setting

Elements of participant observation within this study were implemented on two levels. Primarily, a year was spent fully immersed within the work of the Coastal Policy Unit of Dorset County Council in Dorchester. During this period, a further participant observation component was completed as a means of observing and appraising the geographical fieldwork approaches of formal educational groups visiting the Dorset coast. The second period of participant observation was achieved over a much shorter time scale than the spell within Dorset County Council, but the observational process was of considerable intensity. Both levels of study involved the keeping of extensive field notes including detailed observations, sketches, notes and anecdotes from informal conversation.

As an ethnographer, the role I assumed within Dorset County Council was fundamentally that of participant-as-observer. I became very much a part of the Coastal Policy Unit, then a team of six individuals involved in varying aspects of coastal policy generation. Initially, I undertook preliminary investigative work on behalf of the team but as my own research progressed it was necessary for me to allocate an increasing proportion of my time to its fulfilment. My workspace within the office enabled me to continue participation and observation throughout the year. The period 1998 to 1999 was significant for the Coastal Policy Unit. Extensive work was undertaken on several key projects for the promotion and management of the Dorset coast. The *Dorset Coast Strategy*, developed by the team over several years was finally drafted, subjected to consultation by publics and published. I was permitted to attend key policy meetings, consultation sessions and the eventual launch of the strategy. The team was also working on a proposal to submit the Dorset Coast for consideration as a *World Heritage Site* and on a project based upon the improvement of education, conservation and interpretation surrounding Dorset's Jurassic Coast. It was the latter project, the *Jurassic Coast Project*, which constituted the primary reason for my research within Dorset County Council and it was this project with which I became inextricably linked.

The very small and integrated nature of the Coastal Policy Unit and the length of time spent within the group allowed a considerable rapport to be built with individual members. The mixed age and gender structure of the team, with its very relaxed outlook, enabled me to feel very comfortable within my role as participant-as-observer once I had become initially integrated. I was unsure, however, whether certain members of the group understood my role within the County Council. A considerable proportion of my time was spent in the field, yet my absence from the office was often misconstrued and would prompt comments such as 'did you have a nice holiday?' and 'are you ever going to get your work done?'. Several individuals asked me why I was working on Dorset County Council projects without being paid. Others were convinced that I was an undergraduate on a work placement. Their misinterpretations indicated a lack of awareness of how the work and undertakings of Dorset County Council could relate to academic research.

The contrasting nature of participant observation undertaken with educational groups visiting the Dorset coast enabled me to assume a different role within this setting. Here, I was observer-as-participant because although I participated in the fieldtrip programme, I was primarily observing the student – teacher and student – student interactions, rather than participating in them myself. Furthermore, I observed rather than participated in the fieldwork activities undertaken by the students. Participant observation with each educational group adopted a similar format. I joined the group for one of their (usually five) days spent in Dorset and for that day I accompanied them as they visited sites and centres. My primary aims were to communicate with both teachers and students about the fieldtrip and their individual experiences, to investigate the pedagogical approaches employed by teachers and to assess student uptakes and developments of geographical knowledges. I acted as observer-as-participant on 13 fieldtrips: three primary groups, three GCSE groups, four A-level groups and three higher education groups. Most were mixed sex groups, with the exception of one primary group (girls) and one A-level group (boys). The schools were recruited from both state and private systems. I attempted to enlist schools

from a range of locations, who were visiting varying sites in East and West Dorset.

The comparatively short period of time spent with each educational group and the large size of the classes created obstacles to the building of rapport with individual students. I found it easier to communicate with primary school students than those of secondary school age, but there were also differences between genders at this age. Whilst the girls tended to group round me, chatting and demonstrating their *S-Club 7* dance moves, the boys often ignored me or fled embarrassed when I attempted conversation. I was thus able to gain a greater awareness of the perceptions and understandings of the primary school-aged female students than any other age or gender group. It was difficult to determine how secondary school students perceived their fieldwork experiences, as they were rarely forthcoming with information about their fieldtrips and geographical knowledges. Secondary students were more likely to relate general anecdotes rather than their personal insights. After several failed attempts to obtain adequate information from students, I determined that it would be necessary to revert to the use of a questionnaire survey to support observational data collection. In contrast to many of the students, teachers accompanying the groups were generally very forthcoming and in several cases willingly provided me with detailed information concerning the trip and the knowledges and behaviours of the students.

The varying application of the same ethnographical technique within the study indicates the flexible nature of the participant observation method. The combination of findings from different groups and settings provides valuable claims for improving the validity of individual applications. Such within-method triangulation may be coupled with the between-method benefits of supplementing observational data with individual interviews, questionnaire surveys and documentation to corroborate and strengthen findings.

3.4.2 Interviewing individuals

> The art of interviewing is to be able to conduct a conversation in such a way that the persons you are talking to are able freely to express their opinions and feelings while, at the same time, enabling you to meet your own research objectives. (Burgess, 1992:208)

3.4.2.1 Methodological background

Alongside participant observation, interviewing may be considered fundamental to qualitative research and ethnographic study (Stebbins, 1972; Fetterman, 1989). Jones (1985*a*) suggests that the interview constitutes a successful technique within qualitative data collection because its 'prime currency', talk, is central to life and social interaction. Burgess (1992:208) notes that interviewing may be employed primarily in those cases where the researcher is interested in making "interpretations of the feelings, values, motivations and constraints which contribute to our understanding of people's behaviour". The technique generates considerable insight into the complexities of a problem or situation and may be particularly applicable to research which revolves around specific case studies rather than to representative samples. Like participant observation, the applications and techniques of interviewing methodologies are highly variable. Inherent complexities of approach and procedure may take on a number of forms.

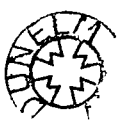
No universal categorisation exists for the variable interviewing techniques available to the ethnographer. Different authors offer individual classifications, with the result that genres of interview which are in practise very similar may be labelled under varying terminology. For example, Jones (1985*a*) makes a clear distinction between 'directive' and 'non-directive' methods, Burgess (1992) between 'formal' and 'informal' methods, and Herod (1993) between 'closed-ended' and 'open-ended' methods. For the purposes of this research project and for the more immediate discussion of interviewing techniques, the classification used will follow that proposed by Cook & Crang (1995), which ranges from 'highly structured', through 'semi-

structured' to 'relatively unstructured'. The authors suggest that whereas highly structured interviews take the form of a verbal questionnaire survey, relatively unstructured interviews may be similar to a conversation (see also Kahn & Cannell, 1957; Stebbins, 1972; Walker, 1985; Marshall & Rossman, 1995). In between these two extremes, the semi-structured interview constitutes a discussion based upon broad parameters set by both the researcher and the informant. The semi-structured interview is widely employed within interpretative research (Borg & Gall, 1989; Burgess *et al.*, 1991; Harrison & Burgess, 1994) and is the method chosen for use within this study.

Jones (1985*a*:47) highlights the importance of achieving a balance in terms of the structure of an interview:

> If we ask more questions arising from what we hear at the time than we have predetermined we will ask, if we hold on to, modify, elaborate and sometimes abandon our prior schemes in a contingent response to what our respondents are telling us is significant in the research topic, then we are some way to achieving the complex balance between restricting structure and restricting ambiguity.

Jones raises several issues relating to the potential limitations of structure within interviewing. If the researcher has determined the questions to be asked prior to the (highly structured) interview, the respondent may be restricted in terms of the information he or she can relate and may not be given the opportunity to offer additional elaboration or knowledge (see also Schoenberger, 1991; Herod, 1993). At the opposite end of the scale, an absence of structure within an interview – such that it constitutes more of a conversation than a research technique – may introduce significant ambiguity to the process. "Not only [do] the interviewees ... not know 'what questions the researchers are asking' but also and therefore, ... the researchers do not know what questions the respondents are answering" (Jones, 1985*a*:48). The semi-structured interview is frequently preferred within qualitative research because in lying mid-way between the two structural extremes, it avoids the considerable limitations of each. The researcher may construct a checklist of



topics with which to organise data responses and to avoid fundamental omissions, but the interview is not bound by this checklist and the interviewer may react to information provided by the respondent, opening up additional lines of enquiry. "The sequence of topics covered in the interview is determined through the interaction of researcher and informant" (Burgess, 1992:210; see also Jones, 1985*a*; Fetterman, 1989; Cook & Crang, 1995; Marshall & Rossman, 1995).

Linked to levels of structure within interviewing, the 'type' of question to be asked is of further significance to the research. Fetterman (1989:51) recognises two fundamental distinctions between the types of questions available to the researcher: 'survey' or 'specific' questions and 'open-ended' or 'closed-ended' questions. Survey questions are those employed to "elicit a broad picture of the participant or native's world, to map the cultural terrain" (see also Spradley, 1979; Cook & Crang, 1995). The interviewee's responses to broad questioning enable the researcher to focus upon particular topics of interest, which may be the subject of more detailed and specific questioning. In addition, questions may be closed or open. Closed questions demand a particular, precise piece of information to be disclosed. Open questions allow for interpretation by the informant and provide further information about individual perceptions and meanings (Fetterman, 1989; Burgess, 1992). The structured interview may rely primarily upon the use of specific and closed questioning, whereas the semi-structured interview may be focused more upon the eliciting of an individual and personal response from informants. As a result, the questions employed within semi-structured interviewing are predominantly of the survey and open-ended genre.

Interviewing techniques require that a rapport be forged between the interviewer and the interviewee, to accomplish and maintain discourse and enable the exchange of information (Fetterman, 1989; Burgess, 1992; Herod, 1993). Marshall & Rossman (1995; see also Jones, 1985*a*) suggest that the key to rapport building lies with the possession of personal interaction skills and the ability to listen, permitting the informant to relate perceptions and experiences in a personal and individual manner. The interviewer may need

to detect changes in tone of voice, gaps in conversation and non-verbal communications such as body language, which indicate that the interviewee is uncomfortable with current topics or may be concealing knowledge (McCracken, 1988; Fetterman, 1989; Burgess, 1992). Addressing issues of confidentiality and the possible presence of a tape-recorder at the outset of interviewing may encourage the informant to speak openly (Burgess, 1992).

An issue common to participant observation and interviewing surrounds the potential implications of gender disparity. Herod (1993) suggests that disparities may take one of two forms. First, research in certain settings may produce more informants of one gender. For example, men may still predominantly fill higher positions within businesses and companies. Herod argues that information provided by informants may vary according to their gender, with implications for the outcome of research. Second, gender may affect researcher – informant relations. Eagly & Carli (1981) uncovered significant differences both in the responses given by informants to male and female interviewers and in the interpretations of the responses made by these interviewers. Gender effects are rarely taken into account during ethnographic research, despite their propensity to "contour behavior and personal interactions" (Herod, 1993:308). Similar effects may result from personal attributes such as age, class, colour and sexuality.

3.4.2.2 Methodological setting

Semi-structured interviews undertaken within this study were primarily conducted with 'key informants', those individuals who are "more articulate or culturally sensitive than others" (Fetterman, 1989:58). Key informants were selected to represent principal areas of expertise relevant to the research and comprised twenty individuals: four from the realms of tourism (hotel and caravan park owners; tourism officers), eight from education (local teachers; field studies centre tutors), seven from interpretation (museums; heritage centres) and one academic. Informants were selected from a list of relevant contacts produced by the *Jurassic Coast Project* officer at Dorset County Council. Individuals were telephoned and asked whether they would be

willing to partake in the research. Recruitment was highly successful, with only one refusal amongst those contacted. The interviews were scheduled for a time and location – often a place of work – selected by the informant.

Interviews were conducted within a semi-structured format. The majority of questions were open and not pre-specified, although a few common questions were asked of each informant initially for purposes of comparison. The broad topics to be covered within the interviews had been previously selected and were recorded in the form of a checklist prompt. The same topics were covered across the range of informant specialities because although the majority of the interview revolved around the informant's area of expertise, his or her understandings and perceptions of other topics would be invaluable for inter-comparison and cross-checking through method triangulation. The topics covered included attitudes towards education, tourism and interpretation, knowledges of geography and geology, and personal perceptions of the Dorset coast.

The duration of key informant interviews was between 45 minutes and one hour, and dialogue was recorded to assist analysis. None of the informants expressed any objection to the interview being recorded and there were no obvious signs that information was withheld. Closed, short-answer questions of the type used for comparative purposes were asked at the outset of the interview to place the informant at ease, but the interview itself was not substantially long enough for any significant rapport to be built. No particular attempt was made to recruit according to ratios of age and sex, it was considered more important to select respondents according to their occupation. Key informants were of both genders and no evident variability was noted in terms of the behaviours and responses of different genders. In most cases, there was a significant age gap between the informant and myself as interviewer. Coupled with any gender difference, such disparity might have been expected to construct obstacles to information exchange, but no problems were encountered.

3.4.3 Focus group interviews

> A focus group can be defined as a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, nonthreatening environment. (Kreuger, 1988:18)

3.4.3.1 Methodological background

As a qualitative technique in the social sciences, the focus group has emerged only during the last twenty years (Morgan, 1997). Its origins lie within market research (Wells, 1979; Greenbaum, 1988), with the group interview traditionally forming part of sociological (Frey & Fontana, 1993) and psychotherapeutic (Bellenger *et al.*, 1979; Burgess, 1996) research.

The focus group involves the simultaneous interviewing of a group of informants (Morgan, 1997) and may be applied within the study of a particular issue or set of issues that form the basis of discussion. The term 'group' is fairly ambiguous, encompassing both very small and very large amalgamations of people. Shaw (1981) suggests that the interactions and conversations of individuals are of primary importance, rather than to the actual number of informants involved. The dynamism of individual interactions forms the basis of focus group research, constituting a process which allows people to "share their views and feelings about an issue" (Burgess, 1996:133; see also Lundberg, 1942; Walker, 1985). Opinions and perceptions are generally formed not as a result of individual discovery but after extensive social interactions and communications:

> Personal opinions might be more appropriately described as derived from social, rather than personal processes. Opinions about a variety of issues are generally determined not by individual information gathering and deliberation but through communication with others. (Albrecht *et al.*, 1993:54)

An interactive situation is replicated within the focus group setting (Burgess *et al.*, 1991; Cook & Crang, 1995) and may be particularly applicable within research into perceptions, discourses, opinions and interpretations (Frey &

Fontana, 1993; Marshall & Rossman, 1995). Morgan & Kreuger (1993:16) add that focus groups may be specifically used to explore gaps in understandings and perceptions between professionals, or academics, and publics:

> Because the interactions in focus groups provide a clear view of how others think and talk, they are a powerful means of exposing professionals to the reality of the customer, student or client.

Despite Shaw's suggestions that the size of a focus group is not of primary importance, the number of individuals to include constitutes a significant factor within group preparation. Hedges (1985) suggests that larger groups construct a greater likelihood that the opinions and perspectives expressed by informants are representative of the population as a whole. However, Hedges adds that "unfortunately the quality of the session suffers with larger numbers. The group becomes hard for the interviewer to control" (1985:75). Many authors suggest that the optimum size for focus group interactions is thus between six and twelve people (see for example Hedges, 1985; Walker, 1985; Stewart & Shamdasani, 1990; Frey & Fontana, 1993; Marshall & Rossman, 1995), with six to eight most frequently encountered. Cook & Crang (1995:59) describe this particular group size as "small & lively" and suggest that it may avoid problems of fragmentation and isolation whilst still being large enough for interesting and valid discussion.

A further consideration in focus group preparation relates to the number of meetings to be held. No hard and fast rules exist for this aspect of the technique, with the number of groups undertaken dependent primarily upon the size and genre of the research project in question and upon the heterogeneity of the population under scrutiny (Walker, 1985). Hedges (1985) suggests that between four and six groups should be undertaken as an absolute minimum for a 'serious project', attributing the upper limit to the time constraints of analysis. Burgess *et al.* (1988*a*; see also Harrison & Burgess, 1988) distinguish between 'once-only' and 'repeat' focus groups. Once-only groups are those in which a particular group of participants meets

on only one occasion, although further groups with different participants may ensue. Once-only groups are "valuable for qualitative research because they provide a forum in which people can share and test out their views with others rather than responding in an isolated interview" (1988*a*:311). The use of 'repeat' groups is concerned more with the building of interpersonal relationships and trust between informants, who may subsequently share strong and deeply held beliefs with the group. The latter method is particularly effective in studies which deal with very sensitive or reactive issues (Burgess *et al.*, 1988*b*).

The effectiveness of focus group dialogue may be impeded by considerations external to the research setting and as a result, many authors suggest that focus group participants should not be previously acquainted. This practicality may in reality be difficult to achieve, particularly where the research setting is company or small town based (Hedges, 1985). To overcome problems of previous encounter, Morgan & Kreuger (1993:6) suggest that the number of groups should be increased, allowing the researcher to penetrate "beyond the narrow set of concerns that may dominate a particular set of acquaintances". Knodel (1993) has identified two distinct sets of characteristics which define a series of focus groups. 'Break characteristics' differentiate the individual groups and 'control characteristics' are common to all groups. The distinctions are important for comparative and analytical purposes. Knodel identifies a subsequent division of control characteristics into either 'uniform' attributes, for example all groups originating from the same geographical region, or 'common' attributes, for example all groups showing a similar mix of participants of each sex. It is usually preferable to conduct a series of internally homogeneous but differing groups.

The role of 'moderator' is particularly important to the effective conduction of focus groups and the collection of data for research. It is a complex and demanding role with no current standardisation or guidelines, hence holds a real potential for improper application and poor results (Morgan, 1993). Some social science researchers suggest that the role of the

moderator is so complex and yet so important that it should only be attempted by professionals (Marshall & Rossman, 1995). In contrast, Morgan & Kreuger (1993) argue that the moderator should be a researcher with detailed knowledge of the project, allowing them to steer the dialogue in the desired direction. The lack of standardisation regarding the conduction of focus groups results from the fact that "styles of group interviewing are highly personal" (Hedges, 1985:79). Frey & Fontana (1993:27) identify a broad distinction between those moderators who adopt a "passive, nondirective approach", involving the gentle steering of discourse towards relevant topics and those who prefer a more "directive or active" role, in which they are more involved and may intervene to control the discussion (see also Cook & Crang, 1995). Many ethnographers prefer the former, non-directive approach which "permits greater flexibility in response patterns and probe tactics" (Frey & Fontana, 1993:27). The non-directive moderator may keep track of broad areas of relevance to be covered through the use of a 'topic guide' (Hedges, 1985). The guide should act as an open-ended prompt with the number of topics kept to a minimum to allow for detailed examination (Kreuger, 1988; Knodel, 1993). It should not obstruct the natural progression of topics and discourse which emerge during the course of the meeting:

> The whole topic guide should be subservient to opportunities which arise during the interview itself – the most exciting findings sometimes come from a completely new lead which no-one had even thought about at the time the topic guide was written. (Hedges, 1985:78)

The role of moderator is not merely to keep the focus group on track. He or she may also play an important part in the establishment of a positive group dynamic. The creation of an "open and permissive atmosphere in which each person feels free to share her or his point of view" (Morgan & Kreuger, 1993:7) begins at the outset of the meeting. The moderator should aim to make each participant feel relaxed and confident; to some participants this will come naturally, others may require some encouragement. Hedges (1985) suggests that simple, introductory questions addressed to each member of the group in turn encourage individuals to speak at the outset, removing barriers to discussion for the remainder of the meeting. Once the

dialogue is underway, Hedges suggests that the moderator's role should be one of 'passionate neutrality'; involved and yet detached. The degree of direction and involvement adopted by the moderator may depend upon the progression of the individual group.

The dynamics of a focus group meeting are fundamental to its success and outcome. Walker (1985:5) suggests that the aim of the focus group is to "capitalise on group dynamics in order to throw light on the research topic" and to generate ideas through interaction, corroboration and feedback (see also Cook & Crang, 1995). In some circumstances, however, the dynamics and interactions of individuals may themselves constitute a threat to the research process (Albrecht *et al.*, 1993). Stewart & Shamdasani (1990) suggest that factors affecting the dynamics of a group fall into three categories. First, the personal characteristics of individual members of the group, which may affect their behaviours or those of other members. Personal characteristics may include demographic variables such as age, gender, race and occupation; physical attributes such as general appearance, size, height and weight; and personality, "a tendency or predisposition to behave in a certain manner in different situations" (1990:39). Second, effects may arise from interactions between different members of the group, including group cohesiveness and compatibility, social power, participation and non-verbal communication. Finally, the environment of the focus group, including the surroundings and spatial arrangements of informants, may influence the development of interactions. Stewart & Shamdasani's three categories of influence may affect the group dynamic by encouraging the emergence of dominant (occasionally aggressive) and recessive group members. Cook & Crang (1995) found more cases of dominance amongst male members of the group and a tendency for female members to break off into individual conversations in smaller groups – perhaps indicating their unwillingness to address the group as a whole.

Group dynamics may also affect focus group discourses by influencing the information vocalised. Dominant members of the group, for example, may state views and opinions which other informants do not wish to challenge.

Dominant members thus have a significant influence upon dialogue during the meeting (Hedges, 1985; Albrecht *et al.*, 1993). Informants may feel under pressure to reflect the views of the group and may be reluctant to express their individual and personal reactions (Banks, 1957; Frey & Fontana, 1993). The silence of an informant may indicate that they disagree with the opinions being stated within a focus group. Minority views may fail to emerge during focus group discourses (Banks, 1957).

The characteristics of group dynamics and interactions may affect the validity of focus group methodologies. The reluctance of individuals to express personal views, coupled with assumptions of the views of others, may colour the eventual pattern of results emerging from discourse. The artificial nature of the focus group setting may restrict natural communications and information-exchange processes between individuals (Bloom, 1989). Group dynamics may also present complex problems for the moderator during focus group proceedings. Differences may arise from the hierarchical dominance of informants and subsequent implications for discourse. The moderator may attempt to subtly overcome particular problems by directing questions at quiet individuals and by encouraging or discouraging speech where necessary through eye contact and body language (Hedges, 1985; Cook & Crang, 1995). Hedges (1985) argues that although the focus group may be artificially constructed by the researcher, the 'social pressures' evident in the dynamics of focus group exchange are real in that similar pressures are evident in 'real' situations. He suggests that focus group dynamics will not significantly alter the research outcome.

3.4.3.2 Methodological setting

Focus group methodology was employed during this study as a means of exploring the perceptions, interpretations and knowledges of resident publics in Dorset. Focus groups were of the once-only genre, used to explore the exchange and sharing of views and values as opposed to the building of in-depth interrelationships between participants. In total, six focus groups were held, including between four and eight participants. A group with four

participants was considered particularly small, but resulted from the absence of individuals who had previously agreed to attend the meeting. Within the series of focus groups the only 'break characteristic' arose from the differing locations in which the groups were held. Break characteristics are not necessarily applicable to the study of a single population subset such as this (Knodel, 1993). Locality differences were instigated to ensure that residents from both East and West Dorset were included within the study. The six focus groups were undertaken in Lyme Regis, Bridport, Wareham, Corfe Castle and Dorchester (two).

During research, significant problems were encountered with the recruitment of participants for focus group meetings. Recruitment attempts were made by contacting diverse local interest and community organisations, requesting single representatives for the group. Such an approach aimed to obtain an adequate sample of the resident population without having to revert to 'cold-calling'. The organisations approached included several parish councils, chambers of trade, golf clubs and branches of the Business and Professional Women's club. The lack of interest shown by the organisations, however, meant that it was necessary to over-recruit two-fold and poor attendance was still a problem. Hedges (1985) attributes poor focus group attendance to inadequate recruitment skills or to a lack of interest in the topic of research. Hedges' latter proposal corresponds to a fundamental theme of the research, suggesting perhaps that publics lack interest in Dorset's coastal geography. Due to the problems of recruitment and because each meeting was held in a small town, it was not possible to maintain complete anonymity between participants.

Of the organisations approached for recruitment, few were of an inherently geographical or geological nature. However, the necessity to state the proposed themes for discussion within the focus group created a situation whereby representatives were frequently those members of the organisations who were in possession of geographical or geological knowledges. The focus groups thus included a number of informants with amateur geographical or geological knowledges. Groups comprised a fairly even mixture of male and

female participants aged between mid-twenties and 65-plus. A larger proportion of informants of retirement age attended meetings than any other age group alone. Due to problems of recruitment, no real attempts were made to control or influence the age or gender compositions of meetings.

As a result of a lack of prior moderator experience and the dearth of prescriptive literature covering the technicalities of focus group conduction, my approach to focus group moderation represented an amalgamation of the suggestions of authors and researchers. Attempts were made to put participants at ease from the outset by inviting individuals to introduce themselves and to relate a short account of their perceptions of the Dorset coast. Initial introductions succeeded in 'breaking the ice' and encouraged further interaction. They were also extremely beneficial for voice recognition purposes during processes of transcription. Throughout the duration of each meeting attempts were made to encourage informants to voice individual and personal opinions, but the role of moderator was otherwise passive and non-directive. Topics of interest were indicated on an overhead projector which assisted in keeping the discussion on track.

3.4.4 The questionnaire survey

> A survey is a method of collecting information directly from people about their feelings, motivations, plans, beliefs, and personal, educational, and financial background. (Fink & Kosecoff, 1985:13)

3.4.4.1 Methodological background

Lazarsfeld (1972:183) suggests that the widespread applicability of the questionnaire survey results from the notion that "asking for reasons and giving answers are commonplace habits of everyday life". Questionnaire surveys have been likened to the structured interview technique, consisting of a formal, rigid assemblage of questions set by the researcher which cover topics relevant to the scope of the research (Fink & Kosecoff, 1985; Fetterman, 1989; Lindsay, 1997). However, unlike the structured interview

the questionnaire survey allows for no further dialogue between researcher and respondent (Bridge, 1992). Questionnaire surveys may often be associated with "so-called 'hard' social science" (Bridge, 1992:196), favouring quantitative as opposed to qualitative analysis. Their lack of flexibility and statistical design has affected their popularity within social science and ethnography (Squire, 1992; see also Walker, 1985), but Marshall & Rossman (1995; see also Kendall & Lazarsfeld, 1950; Fink & Kosecoff, 1985) suggest that there may be a role for questionnaire surveys in the study of attitude, characteristic and belief distribution within a sample population. Questionnaire surveys may also contribute to the validating of wider qualitative findings through method triangulation.

Effective and valid questionnaire surveys are dependent upon three factors. First, the 'sampling theory', ensuring that an adequate sample of the informant population is approached for inclusion within the survey. Second, the 'questionnaire design', adopting the correct wording and style of question. Third, the 'analysis and interpretation' of results (Bridge, 1992). Further issues of validity including the honesty and accuracy of responses may be beyond the researcher's control (Marshall & Rossman, 1995). A purely quantitative approach to analysis may be adopted in the construction of inferences about the characteristics of a broader population. In this case, sampling must be conducted within a very precise and standardised framework (Lindsay, 1997; Robinson, 1998) and an extensive sample collected to ensure statistical representation. Qualitative surveys, which may be used to investigate the perceptions and understandings of an informant group, require a more open, relaxed framework enabling respondents to express individual interpretations of questions. Alternatively, a combination of quantitative and qualitative survey questions may be employed to strengthen and overcome the shortfalls of either method.

The design of the questionnaire survey is highly influential in terms of its success and relevance to the research study (Robinson, 1998). Bridge (1992) suggests that the setting of clear objectives to the survey and the forging of understandings and sensitivities towards the sample population is

crucial in the development of a meaningful set of questions. The 'type' of question employed is of similar importance. Scott & Usher (1999) list numerous genres of question which may be facilitated to elicit valuable and relevant information from respondents. Questions may be broadly divided into two distinct categories: 'closed' and 'open' (Fink & Kosecoff, 1985; Bridge, 1992). Closed questions involve the use of rating scales and multiple-choice options to steer the informant towards a categorical and codeable response (Cohen *et al.*, 2000). Closed questions may be employed primarily within quantitative study (Robinson, 1998), but may be problematic in that they may force respondents to choose between given options rather than accurately expressing their own opinions (Converse & Presser, 1986). In contrast, open questions require respondents to answer in their own words and to express individual interpretations and perceptions (Bridge, 1992). Responses to open questions may be subsequently coded for quantitative analysis but more frequently are geared towards qualitative analysis. In preparing questions of either type, the researcher should ensure that he or she avoids sources of bias which may appear in the form of leading questions or the omission of options within a multiple choice arrangement. Questions should be unambiguously worded such that they may be understood by all individuals within a sample population (Cohen *et al.*, 2000). To check the suitability of questions and the language in which they are written, many authors highlight the benefits of a pilot study prior to survey administration (Bridge, 1992; Lindsay, 1997; Cohen *et al.*, 2000).

As with any methodological technique, there are advantages and disadvantages to the questionnaire survey. Marshall & Rossman (1995) note that the advantages lie with the fact that surveys allow quantitative data to be obtained concerning a particular population or problem. The data may be extrapolated, generalised and replicated and surveys may be tailored specifically to the requirements of the research. Fink & Kosecoff (1985) add that questionnaires are frequently quicker, cheaper and more convenient to undertake than alternative methods. Within the social science tradition, however, the disadvantages of the questionnaire survey are often considered to outnumber the benefits. Marshall & Rossman suggest that the value of

surveys in examining complex social interactions or relations is limited and questions may reflect the researcher's individual perceptions of relevant issues (Robinson, 1998). The sample may fail to represent the broader parameters of the population from which it is taken (Scott & Usher, 1999) and the artificial nature of the questionnaire setting may encourage non-representative responses. Bridge (1992) and Lindsay (1997) stress that the use of the questionnaire survey method should be limited to situations in which it may be difficult to apply alternative techniques. Questions should be constructed such that they are highly appropriate to the study.

Despite their drawbacks, questionnaire surveys have been put to accomplished use within the field of tourism research. Within her study of the cultural values placed upon literary tourism by visitors to the Lake District, Squire (1992, 1994) encountered considerable problems with the recruitment of informant holidaymakers for in-depth qualitative analysis and resorted to the use of a questionnaire survey. Squire highlights the importance of qualitative, interpretative approaches within tourism research, but notes that quantitative survey interviews may be employed in conjunction with interpretative methods, to "highlight different facets of the same problem" (1993:109). The use of open-ended questions enabled participants to "describe in their own words, and with minimal prompting from the researcher, site impressions, and the visit's interest or importance" (1993:109). Squire's open-ended questioning represents a qualitative adaptation of a traditionally quantitative methodology. She thus benefited from the convenience and inherent structure of the method, yet avoided the suggestions of invalidity that quantitative analysis raises within social science research:

> Integrating different methodologies and coding the qualitative material around sets of narrative themes to build analytic structures in the data, suggested one way of situating a particular case study amidst wider patterns of culturally defined attitudes and values. (Squire, 1994:109)

Qualitative methodologies may thus be widely advocated as being most suitable for social science and ethnographic research. However, quantitative

questionnaire surveys may make a valuable contribution to research in two situations. First, where they add strength and support to qualitative findings. Second, where the recruitment of informants for qualitative methodologies proves difficult.

3.4.4.2 Methodological setting

Within this study, the nature of research undertaken was such that significant obstacles emerged to the collection of qualitative data amongst sectors of the informant population. Problems related primarily to the difficulties of recruiting holidaymakers for qualitative methodologies with greater than a ten-minute duration (see Squire, 1992, 1994). It became necessary to revert to the use of a traditionally quantitative method of data collection, the questionnaire survey. The method was applied in the collection of data concerning geographical knowledges and perceptions amongst visitors to the Dorset coast, and also amongst students. Justification for the use of the method stemmed from the well-publicised need for a triangulation of methods which has been stressed throughout this chapter, in particular the possibilities of a co-operation between qualitative and quantitative techniques.

Questionnaire surveys were conducted by the researcher in person, allowing for a degree of interaction. Vincent & de los Santos (1996) document the significant increase in response rates achieved through personal survey implementation in comparison with the impersonal approaches of post or telephone. For comparative reasons and to secure a cross-section of the visiting population, questionnaires were conducted outside four heritage centres, at four caravan parks, at five hotels / guest houses and with tourists attending coach tours of the coast. The number of questionnaires completed totalled 234, enabling a degree of quantitative analysis to strengthen qualitative findings. However, questionnaires conducted within the research project were predominantly qualitative and did not aim to generalise results. Rigorously standardised sampling practice was similarly not considered important. Quantitative analysis of survey results

constituted a minor element of research adding clarification to certain aspects of the study.

The qualitative nature of the questionnaire required that all survey questions were open-ended. The ten questions covered such themes as visitor perceptions of the Dorset coast, views of education / interpretation and understandings of key geographical and geomorphological concepts. The precise format of the questions was determined through detailed consideration and the conduction of a pilot study amongst willing volunteers and publics. The pilot study resulted in significant adaptation and abridgement of the survey, ensuring that the remaining questions were both correctly and unambiguously worded, and entirely necessary. The final version of the questionnaire was finely tuned to the precise needs of the study, exacting valid responses from participants. Identical questionnaires were implemented at each location, with differences only in terms of heritage centre and interpretation questioning. A copy of the questionnaire is included in *Appendix 3.1*.

The questionnaire survey was implemented throughout August and September 1999. It was decided that the months of August and September would provide a combination of family groups and visitors who wish to avoid the school holidays, including both younger and older couples. As with all questionnaire surveys (Vincent & de los Santos, 1996), the response was varied. At one heritage centre, not one refusal was encountered. At another, the response rate was just 50 per cent. I determined that the timing of the questionnaire survey was crucial. Caravan parks and hotels were almost empty during the day and individuals were best approached before they left their accommodation for the day. Heritage centres were busiest during the afternoons, but if the weather was fine they often remained empty for much of the day. Respondents were not selected in specific constructs of age or sex, although this information was recorded on the questionnaire survey. These factors were not considered as important as the individual and diverse perceptions related by respondents (Squire, 1992), the number of whom

might have been restricted had I worked towards specific age / sex constructs.

Concurrent triangulation of methodologies as suggested by Wolff *et al.* (1993) was implemented within this study. Similar themes were addressed within the questionnaire survey as within the other methodologies employed. Findings from different methods thus contributed not only to understandings of the informant group studied but also to those of the other groups through the overlapping responses of informants. Each methodology thus subscribed to an overall picture of the perceptions and knowledges of geographical audiences at the Dorset coast. In the case of the questionnaire survey – the final methodology to be applied – the nature of the questions was shaped significantly by the findings and preliminary analyses of focus groups and interviews.

3.5 The analysis of qualitative data

> Analysis is partly a matter of describing what was actually said; but much more a matter of *interpretation*, since the direct semantic content is rarely the whole (or even the most important part) of the story. (Hedges, 1985:88)

The analysis of qualitative data may be considered the most significant part of an ethnographic study (see Baxter & Eyles, 1997; Bailey et al., 1993). Qualitative analysis incorporates interpretation rather than mere description, involving the deduction of meaning from discourses, implications and interactions. Linking contextual findings to pre-existing theoretical frameworks and retrospective documentary sources enables the formation of a 'creative synthesis' of data with which to frame analytical developments, making sense of research settings and informing subsequent field investigations (Burgess, 1992; see also Bastin, 1985).

3.5.1 The analytical process

The analysis of qualitative data may be considered a highly personal process, very much dependent upon the interpretative and creative skills of the researcher and influenced by the purpose of the research project and the characteristics or understandings of the socio-cultural group under study (Jones, 1985*b*; Knodel, 1993). There are arguably few prescriptive rules governing the procedure, but key elements of qualitative analysis are common to many approaches and applicable to the textual data produced by the wide variety of methodological techniques addressed in section 3.4.

Initially, data in the form of interview and focus group recordings must be converted into a textual format through processes of transcription. Transcription may be lengthy and time-consuming, yielding large quantities of data. Knodel (1993; see also Kreuger, 1988) warns that between forty and fifty pages of textual transcript may be produced from two hours of focus group dialogue. However, transcription ensures that all data is textually based and may thus be treated in a similar fashion during analysis. Potter & Wetherell (1994:58; see also Wooffitt, 1990) highlight that during transcription, attention should be paid to the 'unspoken detail', "the pauses, repairs, word choice and so on – are potentially there for a purpose; they are potentially part of the performance of some act or are consequential in some way for the outcome of the interaction". However, the researcher should not become too involved in the analysis of such detail, as the meanings generated are presupposed rather than substantiated. The acknowledged complementarity between conceptual procedures in this study enables data collected within ethnographic study to be subjected to interpretation through the framework of grounded theory. A grounded theory approach to analysis involves the categorisation, definition, reassembly and systematic linkage of findings to create a visual model around which the central theory is constructed (Jones, 1985*b*; Cresswell, 1998).

Processes of textual analysis involve the coding and classification of data and the establishing of relationships between emergent categories. The

categorisation of data enables the researcher to conceptualise and contextualise data for the subsequent development of themes and theories (Mason, 1994). Processes of categorisation and thematic consideration are common to the qualitative analysis of data from all textual sources, but naturally there may be some individual variability. Focus group discourses, for example, involve considerable interaction between participants. The context of speech may thus be as important as the actual dialogue (Knodel, 1993). Individual interviews, on the other hand, provide cognitive representations of the personal views and perceptions of informants (Jones, 1985*b*). Data from participant observation study differs further. Information is collected from a variety of sources and may be of variable types, producing a "multifaceted model of society" (Bastin, 1985:99). Questionnaires produce data which may be quantitative, categorical or qualitative yet directed. Questions are pre-selected and produce little opportunity for extended dialogue.

A major component of qualitative data analysis is the categorisation and sorting of data to establish the "central interpretive themes" (Burgess, 1992:212). Categorisation involves "physically organizing and subdividing the data into meaningful segments" (Knodel, 1993:44-45) which may then be subjected to interpretative scrutiny. Marshall & Rossman (1995) suggest that categorisation fulfils the purpose of reducing large quantities of data into 'manageable chunks', but highlight the importance of maintaining a depth of detail during this process. Coffey & Atkinson (1996:29) add that categorisation may "expand, transform, and reconceptualize data, opening up more diverse analytical possibilities" and contributing further depth to the interpretative process.

Categorisation – and subsequent contextualisation – of data is unavoidably subjective (Knodel, 1993; see also Borland, 1991). Jones (1985*b*) highlights the difficulty of attaining full, empathetic understandings of informant cultures and meanings. The concepts and frameworks by which discourses are categorised and interpreted are fundamentally those of the researcher. Subjectivity is an inherent problem of qualitative research,

overcome only by the clarification of conceptual frameworks and through ensuring that "this 'second level' of meaning retains some link with the constructions of the research participants" (1985*b*:57). She adds, "I try to develop my conceptual categories from the crucial base of the categories and concepts of research participants" (1985*b*:59; see also Glaser & Strauss, 1967). The categorisation of data is frequently accomplished through coding, whereby data is organised into "analytically useful subdivisions" (Knodel, 1993:45).

Processes of coding for the categorisation and subsequent linking of data are highly personal and dependent upon the preferences of the individual researcher. Knodel (1993) suggests that categories for the organisation of data should reflect those originally determined by the researcher for discussion within the focus group or interview. Conversely, Jones (1985*b*) is opposed to the practice of pre-selecting categories for coding. She suggests that categories should be generated inductively from the data, reducing the effects of researcher preconceptions and complacency in coding. Bogdan (1989:137) adds that "the cardinal rule of coding in qualitative analysis is *make the codes fit the data and not vice versa*". Hopkins (1998) employed techniques of coding during his study of the semiotic representations of rural Canada contained within promotional tourism literature. Here, the symbolic images and texts were coded according to categories emerging from the data set.

Technological advance and widespread computerisation has enabled the development of textual coding through computer software packages. The coding of qualitative data by computer has been possible for two decades, a welcome assistance to social scientists in such a lengthy, time-consuming process (Mason, 1994). Computer-assisted coding is interactive and quick, effective and systematic (Dey, 1993). Many different software packages are marketed for purposes of coding and categorisation (see Knodel, 1993; Miles & Huberman, 1994; Cook & Crang, 1995). *Atlas.ti* is one of the most popular, developed by Thomas Muhr in the late 1980s (Muhr, 1991). It is a relatively complex program which allows linkages and relationships between categories to be defined (QUARC, 2000). Despite their facility to decrease

the considerable amount of time spent analysing data, there may be fundamental drawbacks to computer-assisted coding. The researcher may 'lose touch' with the data, with analysis becoming "submerged in the method, leading to meaningless results" (Green, 1999:2). The researcher may thus lose the closeness to data which is often forged during lengthy manual categorisation and coding processes.

Once data has been coded and categorised, there are various ways in which qualitative analysis may proceed. Many authors employ processes of mapping, primarily concerned with the establishment of linkages and interrelationships between categories (Mason, 1994). Knodel (1993) argues that mapping starts as early as the coding process, marking segments of textual transcript and drawing linkages to constitute a form of 'code-mapping'. Alternatively, mapping may be considered a more complex process which is carried out separately to coding. Jones (1985*b*) suggests that mapping results in 'intense immersion' within the data, allowing the researcher to develop more insightful conceptualisations and theories from emerging themes and linkages. By its very nature, categorisation results in the 'fracturing' and separation of data. Without processes of mapping it is often difficult to retain a concept of the interrelationships and associations between categories.

Processes of mapping may adopt variable formats depending upon the individual preferences of the researcher. The source of the data makes a substantial difference at this stage, with diverse structures of dialogue and levels of interaction best explored through different mapping procedures. For example, Jones (1985*b*) employs processes of 'cognitive mapping' within the analysis of individual interviews. Cognitive mapping enables the diagrammatic illustration of individuals' perceptions, beliefs and knowledges as they emerge from the interview data. Jones explains that "a cognitive map comprises two main elements: persons' concepts of ideas in the form of descriptions of entities, abstract or concrete, in the situation being considered and beliefs or theories about the relationships between them, shown in the map by an arrow or simple line" (1985*b*:60). Complexities of meanings and

priorities attributed by informants may be represented and organised in a visual format. Cognitive mapping may also be adapted for use in a group setting (Miles & Huberman, 1994).

An alternative approach to mapping, in this case for the purposes of focus group analysis, involves the construction of a 'discursive map' (Burgess, 1996). The discursive map highlights the themes, narratives and contexts of focus group discourse. The map forms a visual representation of the issues covered and allows comparisons to be drawn between the separate themes and between different focus groups transcripts. Cook & Crang (1995) suggest that code mapping may also be employed in the diagrammatic illustration of linkages between individual code categories. Their approach is both simple (in terms of technique – the resultant maps may be fairly complex) and effective, constructing links and clearly indicating contextual interrelationships from which hypotheses and theories may be drawn. Unlike some of the more complex mapping techniques, the approach does not detract emphasis away from the most significant aspect of qualitative analysis, the text itself.

Mapping processes create explicit linkages between sources, types and categories of data. Subsequent analyses revolve around the "search for patterns within and between these subdivisions to draw substantively meaningful conclusions" (Knodel, 1993:45). Contextualisation and reference to earlier literary findings may contribute to the disclosure of emergent hypotheses and themes from the data (Jones, 1985*b*). To add support to analytical findings, Marshall & Rossman (1995:116) describe a process of "testing emergent hypotheses". Once conceptualisation and thematic analysis has produced a degree of theorisation or hypothesis development, the full set of data is closely scrutinised for examples which either reinforce or reject emergent patterns and hypotheses. Reliability may also be assessed through triangulation between and across different sources of data (Knodel, 1993), or through respondent validation. In the latter case, analytical findings are verified by informants who have participated in the research (Bloor, 1978; Silverman, 1993).

In summary, the analysis of qualitative data is a highly complex process (Burgess, 1992). It requires a great deal of time and expertise (Hedges, 1985; Jones, 1985*b*) and the continuous, repetitive reading and assimilation of textual data (Knodel, 1993; Marshall & Rossman, 1995). Few prescriptive guidelines exist for the conduction of qualitative research; it is a highly personal process, dependent upon both the preferences of the researcher and the nature and objectives of the research. The most significant aspects of qualitative data analysis constitute the very thorough and detailed analysis of findings and the production of meaningful and conceptually based research. An ethnographic study is valueless without these factors, which are significantly more important than the route by which they are attained.

3.5.2 Analytical application

Variable concepts of qualitative data analysis have been applied within this ethnographic study. Analysis was primarily of textual based data (see Bennett, 1996), procured through the transcription of dialogue and from responses to open-ended survey questions. Data from all sources, whether it was individual interview, focus group, participant observation or survey, was utilised in combination, and contributed to every aspect of the study. The combination of data from variable sources constituted an element of triangulation, adding depth and clarification to the study. Each method was employed specifically in the study of a particular informant group. Analysis was thus systematic, focusing first upon the coding and categorisation of the main data source and subsequently upon the contribution of additional findings. Each data source was treated in a similar way during analysis. Following transcription (textualisation) of observations, texts were scrutinised and annotated prior to coding.

The need for a proximity between the researcher and the data has been stressed by Knodel (1993), who states that closeness constitutes a

fundamental difference between qualitative and quantitative methodologies. The thorough and repetitive reading and annotation required for the manual coding process (Hedges, 1985; Knodel, 1993; Marshall & Rossman, 1995) is considered to benefit and strengthen the analysis of data, hence this approach was employed rather than any computer-assisted technique. Transcripts and texts were coded using colour and key word differentiation, and annotations concerning linkages and quotes were added to the margins (see Delamont, 1992). Texts were subsequently photocopied and the 'cut and paste' methodology adopted (see Stewart & Shamdasani, 1990), whereby text referring to individual categories was removed and grouped thematically. The outcome was thus similar to that achieved through computer-assisted coding, constituting the amassing of extracts relating to individual categories. However, a closeness with the subject matter was maintained.

The mapping process employed throughout the research project closely resembled Cook & Crang's 'code map' (1995; also Mason, 1994). Categories determined through coding were linked diagrammatically to portray a visual representation of interrelationships for contextual analysis. Emergent themes were linked to literary sources, allowing the development of theories and the extrapolation of patterns and results. To confirm the validity of findings, original data were further scrutinised to uncover evidence for the support or rejection of claims.

A questionnaire survey might be perceived to require a different approach to analysis due to its traditionally quantitative roots. However, the questionnaire surveys implemented within this study employed only open-ended questions, the nature of which generated predominantly qualitative textual response. The questions addressed respondents' perceptions, knowledges and understandings of the coastal environment. They could thus be analysed using similar approaches to other qualitative data sources, but with some fundamental differences. The nature of questionnaire responses is such that categories for the coding and analysis of data are pre-formed. Questions seldom generated more than a few lines of text and with the large

quantity of surveys completed, the amount of meaningful analysis and linkage that could be drawn both between and within individual responses was limited. Lists, rather than explicit mappings were constructed to illustrate the nature of responses and to elicit information on the most popular or frequently voiced conjectures. Such an approach, similar to the semiotic analyses of Hopkins (1998), was possible as respondents had a tendency to list descriptive words to represent their feelings or perceptions. A minor quantitative aspect to survey analysis was adopted alongside textual conceptualisation and theorisation. The figures generated by the quantitative element – comprising primarily of percentage comparisons – were not subjected to rigorous statistical analysis or generalisation in the nature of a purely quantitative study. Instead, they were introduced into the text for purposes of comparison, clarification and depth.

3.6 Conclusion

Over the past three decades, the importance of qualitative investigation in the representation of diverse human attitudes and behaviours has been recognised (Walker, 1985; Strauss, 1987; Coffey & Atkinson, 1996; Lindsay, 1997). Approaches to qualitative analysis have thus been increasingly employed within social science and human geography research (Bogdan, 1989; Cook & Crang, 1995). Qualitative investigation into the development of formal and informal geographical knowledges within Dorset's coastal landscape constitutes a primarily ethnographic study, based upon the contextual representations of cultural groups and audiences within a specific locational setting (Cresswell, 1998). Ethnographic study employs the key methodology of participant observation (Johnston *et al.*, 1986) and within this study, the method was conducted on two levels. Primarily, participant observation occurred within the comprehensive framework of Dorset County Council's Coastal Policy Unit. A secondary element was adopted in the study of formal educational audiences at the coastline.

Bastin (1985), Hunt (1989) and Cohen *et al.* (2000) advocate the use of multiple methodologies and methodological applications in the verification and substantiation of data, employing techniques of triangulation. Within this study, the technique of participant observation was considered inappropriate for research amongst variable informant audiences. Multiple methodologies were thus triangulated across conceptual traditions and ethnographic data were interpreted through the framework of grounded theory. Focus groups and key informant interviews were conducted alongside observation, enabling between-method and within-method triangulations.

Problems of informant recruitment encountered within this study of popular audiences have been reflected within wider tourism research (see Squire, 1992, 1994). To overcome the insufficient quantity of depth responses amongst visiting publics, a quantitative survey element was adopted enabling verification of the distribution of perceptions, characteristics and knowledges within the informant population (Kendall & Lazarsfeld, 1950; Fink & Kosecoff, 1985; Marshall & Rossman, 1995) and increasing confidence in qualitative data findings (Jick, 1979; Ley, 1992). A similar quantitative survey element was introduced to explore the extent to which secondary students benefited from and valued their geographical fieldwork experiences.

Analytical processes involved in the elucidation of findings from research into formal and informal geographical knowledges revolved around the consideration of variable data sources and types. Qualitative analysis is a highly personal process, dependent upon the requirements of the research project and upon the preferences of the individual researcher (Jones, 1985*b*; Knodel, 1993). However, basic principles of transcription and textualisation, coding and categorisation, contextualisation and theorisation were applied to the data findings. Data were utilised in combination to substantiate variable aspects of the study, allowing triangulation and the verification and strengthening of findings. Combining data sources also allowed the input of additional detail to studies of geographical knowledges and learning amongst informant audiences and enabled the cross-checking of findings. Throughout

this thesis, data are explored as they relate to informant audiences rather than in terms of the individual qualitative methodologies. Contextual chapters are divided into the consideration of formal and informal geographical knowledge developments at the Dorset coast. Formal learning incorporates discussion of school and higher education fieldtrip encounters, whereas informal learning is based upon the geographical experiences of popular audiences.

Chapter 4

Formal Geographical Learning in the Field: Representation and Encounter

Chapter 4: Formal geographical learning in the field: representation & encounter

4.1 Introduction

The geographical and geomorphological significance of landforms and sites located along the Dorset make the area extremely popular amongst formal educational groups. Over 250,000 students from Key Stage 1 to A-level, higher education and lifelong learning (adult education) visit the coast each year for purposes of fieldwork (Dorset Coast Forum, 1998*a*). The main catchment for visiting groups spans a 250-kilometre radius of the Dorset coast, but schools may travel from locations as distant as the Midlands and Liverpool. This chapter focuses upon the ethnographic study of educational groups visiting Dorset, with the recognition that fieldwork may constitute a significant framework through which audiences learn about geography, and studies the processes and implications of formal geographical learning. However, the encounters and experiences of educational groups may be highly variable; the diversity of facilities and provisions for fieldwork in Dorset place the onus upon teachers to develop individual programmes for geographical learning in the field.

Despite a strong emphasis upon fieldwork within the National Curriculum, schools face increasing difficulties with the technicalities of fieldtrip organisation and provision. Problems arise from factors including the declining grants for fieldwork (Smith, 1999), the time pressures of completing the extensive National Curriculum (Catling, 1999*b*; Rawling, 1999) and recent concerns with safety and risk outside the school environment (Smith, 1999). As a result, schools are increasingly reluctant to allow students to attend fieldtrips, especially if they involve a residential stay.

In the light of threats to the future of fieldwork, McEwen (1996:380) suggests that "if fieldwork is to maintain and enhance its status within undergraduate [and other] geography programmes, its educational value must be justified" and "the 'value-added' by fieldwork needs to be communicated effectively to students, staff and budget holders". The pedagogical value of fieldwork has been widely accepted within formal geographical education through anecdotal and experiential evidence, but there has been little comprehensive research to substantiate claims (Mackenzie & White, 1982; Prentice, 1991; Foskett, 1999; Smith, 1999; Fuller *et al.*, 2000). Declining student numbers at secondary and higher education levels suggest that formal geographical learning may fail to connect with individuals' popular encounters and experiences, despite the widely perceived relevance of geography to variable aspects of everyday life. Fieldwork may be considered an approach towards the establishing of links between education and experience. However, this study highlights the difficulty of assessing the value of fieldwork contributions to geographical learning. The diverse nature of fieldwork encounters may influence the extent to which students' learnings and geographical knowledges are enhanced by their experiences.

The chapter is based upon the participant observation study of thirteen fieldtrips involving students of variable ages. It investigates key pedagogical themes relating to the diversity of learning experiences encountered within the field. Variability may result from the mechanisms by which individual teachers attempt to overcome problems of teaching geography in the field, in particular issues of geographical representation – the extent to which fieldwork accurately represents themes of physical geography. Investigations centre on the establishment of connections between geography in the field ('real') and in curricula and syllabuses ('contrived'), and address the teaching of process-based geography. The chapter subsequently focuses upon the variability of individual student experiences and the contribution of fieldwork encounters other than the formally academic to geographical learning. The variability of geographical encounters within formal education is supported by a case study of a fieldtrip amongst students from Key Stage 2. Observations

of fieldtrips have been supplemented with data obtained through a student questionnaire survey (see *Appendix 4.1*).

4.2 Fieldwork encounters at the Dorset coast

The Dorset coastline is a hugely popular area for fieldwork. However, the extent to which students may benefit from fieldwork encounters at the Dorset coast – in terms of both geographical learnings and developments of transferable fieldwork and personal skills – is highly dependent upon pedagogical approaches to teaching and learning adopted within the field. The popularity of the Dorset coast and the diversity of fieldtrip encounters and experiences within the area are reviewed within this chapter. First, however, the chapter establishes the importance of fieldwork to formal geographical learning.

4.2.1 Fieldwork and formal geographical learning

Formal geographical learning occurs within compulsory education, which in the UK extends between the ages of 5 and 14 years (years 1 to 9). They also incorporate the non-compulsory learnings of GCSE and A-level students between years 10 and 13, and the degree-level study of geography by undergraduate students. The development of formal geographical knowledges amongst students may be considered important in three respects. First, for purposes of personal education. Students may benefit from knowledges of place, space, culture and landscape and from the development of transferable skills such as IT, communication and teamwork (see Lee & Myers, 1980; Binns, 1996; Dyas & Bradley, 1999; Chalkley *et al.*, 2000). Second, the development of geographical and environmental awarenesses may have positive implications for conservation. Ballantyne (1999; see also Lee & Myers, 1980; Kent, 1999; Rauch, 2000; Swonke, 2000) argues that experiences of nature through fieldwork may enhance

students' environmental attitudes and behaviours. The possibility was also recognised within Dorset:

> I: Do you support (.) the extensive use of the Dorset coast (.) by educational groups?
> R: Yes, I think that (.) education is a really (.) really important factor. Um (..) not (.) not to (.) not just to pupils, but to (..) the young, the middle-aged, the old. They *need* to be educated as to (...) what is under their feet, *what* their island is made up of.
> I: Why is education so important?
> R: I think if we can (..) educate (.) the youth to the importance (..) of the commodities that lie within (.) their (.) area, (...) within their coastline, within their county, within their country (...) If you've got an understanding, you then know the (.) you can understand the importance of it (...) and then (.) the (.) the sort of knowledge would then (...) give you a reason why it should be looked after. Because if it (.) if it isn't understood, if it isn't looked after (..) then it's going to be lost for future generations. (Leisure, Entertainments & Tourism Officer, Weymouth & Portland Borough Council)

The third benefit of formal geographical education relates to implications for the subject as a discipline. In the US, geographical educators are engaged in promoting the concept of a 'geography for life', a "widely-accepted set of pre-collegiate geography standards" (Chalkley *et al.*, 2000:242) which ensures that although students may not pursue the subject beyond high school, they are equipped with fundamental geographical knowledges 'for life'. In Britain, lifelong learning and adult education initiatives may introduce geographical knowledges into the adult population, but only a small number of individuals may engage in such learning. As in the US, the more extensive popularisation of geography may be achieved through the medium of school learning (Lewis, 1985). If the wider relevance of geography is highlighted and taught in an interesting and enjoyable way within schools, students may be encouraged to pursue the subject at secondary and higher education levels. Ballantyne (1999) suggests that fieldwork in particular may heighten the appeal of geography amongst students, a view supported by teachers encountered within this study:

> Students ... generally rate the opportunity to participate in fieldwork activities as one of the most liked aspects and important reasons for taking school geography. (Ballantyne, 1999:52)

> The fieldtrip is a really important part of the A-level course (..) because it is quite often what makes the students' minds up to do geography at university. (Geography teacher, West Midlands secondary school)

Fieldwork contributes to geographical learning through accelerated learning and cognitive development. Many authors argue that learning geography outside the classroom, with opportunities for students to observe, measure and experience geographical phenomena, may enhance understandings and recall of geographical knowledges (see Kern & Carpenter, 1986; Pinet, 1989; Foskett, 1999). Fuller *et al.* (2000) note that the measurement of cognitive acceleration is difficult, but discussions with students from years 10 and 12 revealed some recognition that fieldwork encounters had contributed to individual geographical understandings:

> I didn't really understand coastal landforms before the fieldtrip but I do now. (Female student, 15; Kent secondary school)

> It has helped me to understand them [the topics] more clearly. (Male student, 15; Kent secondary school)

> It was easier to understand on the fieldtrip. (Female student, 17; West Midlands secondary school)

> Actually being in an area where you can see these landforms gives you a great impression and an easier understanding of how they formed. (Female student, 17; West Midlands secondary school)

The spectacular and aesthetic nature of landscapes encountered during fieldtrips may further encourage the development of geographical knowledges amongst students. For example, a group of year six pupils from Buckinghamshire was clearly impressed by the spectacle of Old Harry Rocks. The pupils were enthusiastic about viewing the landform and asked to be

photographed in front of it. They appeared attentive to information provided by their teachers and asked questions about the landform, particularly regarding the origins of its peculiar name. It was perhaps the aesthetic and unique spectacle of the landform which enthused the pupils, a possibility reflected within the responses of older students:

> I found landforms the most interesting topic because they were nice to look at. (Female student, 15; Kent secondary school)

> I found the Threatened Landscapes topic the most interesting because of the view. (Female student, 14; Hertfordshire secondary school)

Spectacular and aesthetic landscape sites encountered during fieldwork may be responsible for enhancing geographical interests amongst students. Landform images may also form connections with geographical knowledges within the memories of students, creating positive cognitive conditions for the development of geographical understandings (see Lee & Myers, 1980; Bruner, 1988).

The contribution of fieldwork to geographical learning is recognised within the National Curriculum. *Table 4.i* indicates the fieldwork content in each stage of formal geographical education. From Key Stages 1 to 3, fieldwork emphases are placed upon the local environment and the development of skills including mapping, measurement and data recording (DfEE, 2000). At GCSE and A-level, geographical examination syllabuses may incorporate a significant proportion of coursework, requiring extensive fieldwork investigation. Enquiry-based syllabuses such as Edexcel's *Geography 'B'* and OCR's *Avery Hill* place a particular emphasis upon coursework for independent completion by students (Hall, 1996; Marsden, 1997; Birnie, 1999).

	Contribution of fieldwork to the geography syllabus
Key Stage 1	Use fieldwork skills, for example recording information on a school plan or local area map (DfEE, 2000).
Key Stage 2	Use appropriate fieldwork techniques, for example labelled field sketches, and instruments, for example a rain gauge, a camera (DfEE, 2000).
Key Stage 3	Select and use appropriate fieldwork techniques, for example land-use survey, datalogging, and instruments, for example cameras (DfEE, 2000).
GCSE example: OCR Avery Hill syllabus	Develop a range of practical, technical, intellectual, social and communication skills necessary for geographical enquiry, including the ability to observe, collect, interpret, analyse, evaluate and communicate geographical information. Undertake, supported by fieldwork, an individual investigation relevant to the coursework assessment component of the syllabus (OCR, 2000).
A-level example: Edexcel Geography 'A' syllabus	Identify, select and collect - using a range of techniques - quantitative and qualitative evidence from primary sources, including fieldwork. Complete a 2,500 word personal enquiry forming 20% of overall assessment (Edexcel, 2000).

Table 4.i: The contribution of fieldwork to geographical learning at each stage within formal education.

4.2.2 The popularity of Dorset's coastal landscape for fieldwork encounter

The benefits of fieldwork to formal geographical learning go some way in explaining the extent to which the Dorset coast is utilised by educational groups. However, the popularity of this specific coastline may stem from the 'classic' nature of the geological and geomorphological landforms located along its 150-kilometre length. Edmonds (1998*c*:2) writes:

> The Dorset coast is, without doubt, one of the finest teaching areas in the UK for the earth sciences. Groups of all ages undertake fieldtrips in order to study the rocks, fossils, industrial geology and geomorphology that are so superbly illustrated along the length of the coast.

Fortey (1993:175) adds, "if any ground in Britain deserves the over-used epithet 'classic', it is the Dorset coast". Almost 140 million years of geological history are represented along the coastline, which incorporates landforms and lithological exposures from the Jurassic, Cretaceous and Tertiary periods (House, 1989; Jurassic Coast Project, 1999; Dorset County Council *et al.*, 2000). Geomorphological processes including tectonic movement, erosion, deposition and landsliding have shaped the landscape (Allison, 1992; Kimber, 1998), creating such spectacular landforms as Lulworth Cove, Durdle Door, Chesil Beach and Old Harry Rocks (see *Figures 4.i* to *4.iv*). Chesil Beach is one of the finest examples of a barrier beach in the world. The elliptical shape of Lulworth Cove is considered to be unique (Dorset County Council *et al.*, 2000).

The coastal landscape of Dorset has formed the basis of research undertaken by geographers and geologists for centuries. Fisher (1817 – 1914), for example, drew inspiration for his seminal text, *The Physics of the Earth's Crust*, from Purbeck formations. Arkell (1904 – 1958) established the Jurassic landforms of West Dorset as standards of reference for his study, *Jurassic Geology of the World* (Dorset County Council *et al.*, 2000; see also Cadbury, 2000). In contemporary geography, Dorset's landforms are still widely acknowledged and researched. The landforms demonstrate many of the structures and processes included within curricula of formal geographical learning (Edmonds, 1998*c*). Secondary examination syllabuses frequently cite the Dorset coast as an example for case study. The OCR *Geography 'A'* GCSE syllabus (OCR, 2000) recommends the Purbeck coast of Dorset for the interpretation of erosional landscape features. The Edexcel *Geography 'A'* A-level syllabus (Edexcel, 2000) suggests that Studland beach forms an ideal location for the study of coastal processes and ecosystems. Perhaps resulting from its prominence within curricula and syllabuses, the Dorset

Figure 4.i: Lulworth Cove from the west, depicting educational groups utilising the site.

Figure 4.ii: Durdle Door arch from the west.

Figure 4.iii: Chesil Beach and Portland Harbour from West Cliff, the Isle of Portland.

Figure 4.iv: The chalk stacks of Old Harry Rocks from the west.

coast is well covered within geography textbooks. *Table 4.ii* indicates the frequency with which key sites are mentioned within textbooks for Key Stage 3, GCSE and A-level. The chalk stacks of Old Harry Rocks are particularly widely cited within the selected textbooks. The stacks represent a prominent theme of erosion encountered within physical geography syllabuses. Alongside the landforms of Chesil Beach, Lulworth Cove and Studland, they constitute a popular site for visitation amongst educational groups.

Members of staff from Dorset's field studies centres have supported the suggestion that the popularity of the county's coastline for formal educational encounter may be at least partially explained by its prevalence within textbooks and syllabuses:

> I: *Why* do you think the Dorset coast is (..) so (..) popular with school groups?
> R: Um (..) if you look at a multitude of geographical text books you will see all these places (...) figured or illustrated, diagrams or whatever it is. I would think that (.) um (.) that's obviously pitched at a certain (...) area. (Tutor, Hooke Court Field Studies Centre)

> We have a very small coastline which (..) everyone goes to that's quoted in text books. (...) It's a concentrated effect I think. (Tutor, 3-D Educational Adventure)

A secondary group from Hertfordshire selected the Isle of Purbeck for study, as it was the specific example cited within their syllabus[3]. Whether or not their reasoning was reflected amongst other educational groups, the high levels of visitation experienced by some of Dorset's sites – Lulworth Cove has in the region of 500,000 visitors per year (Dorset Coast Forum, 1998*c*) – indicates the sustained importance of the region in geographical and geological terms. Dorset's landform sites are widely considered to be relevant and inspiring for formal geographical learning.

[3] The group were studying the OCR *Geography 'A'* syllabus for GCSE (OCR, 2000).

		Old Harry Rocks	Chesil Beach	Lulworth Cove	Studland	Isle of Portland	Durdle Door	Swanage	Christchurch	Burton Bradstock	Abbotsbury	Black Ven	West Bay	Kimmeridge	Poole	River Frome
KS3	*Geothemes* (Murray *et al*., 1993)		■													
GCSE	*Key Geography* (Waugh *et al*., 1994)	■		■			■							■		
	Key Geography (Waugh, 1995)	■														
	Key Geography (Waugh *et al*., 1997)	■														
	Geog. Enquiries (Nagle & Spencer, 1997)				■		■									
AL	*Adv. Geography* (Guiness & Nagle, 1999)		■	■	■	■		■		■	■	■				
	Adv.Geography (Hill, 1999)															■
	Integrated Approach (Waugh, 1995)	■	■			■		■	■				■		■	

Table 4.ii: The prominence of Dorset's coastal landforms within key secondary textbooks.

Table 4.ii indicates the prominence of Dorset's coastal landforms within key geography textbooks. Four of the most frequently cited landforms correspond with the existence of 'honey-pot sites' for educational visitation (Dorset Coast Forum, 1998*a*)[4]. Within this study, many educational groups completed a hypothetical 'tour' of the key coastal sites. Each of the groups travelled to at least one of the key honey-pot sites, and seven visited Lulworth Cove or Studland beach during the course of their fieldtrips. A lack of variability in terms of the sites visited by educational groups is exacerbated by the short length of the fieldwork season. Currently, only five months of the year are widely utilised by educational groups: April to June and to a lesser extent September and October (Dorset Coast Forum 1998*a*), periods characterised by fine weather and longer days. During the peak fieldwork season, several groups may visit a site or facility at one time. Significant overcrowding is often the result, placing pressure upon sites and reducing the quality of fieldwork experiences amongst students:

> If you go down to Lulworth Cove in the summer or if you go down to Studland (..) you can see as many as *ten different groups* there. (..) I mean at Studland I've seen two different groups trying to do profiles across the same dunes at the same time getting their tapes muddled up almost! (.) And that's the sort of problem you've got from those places. (Retired geography teacher, Dorset Geologists' Association)

> Swanage certainly is regarded as the (.) place where you certainly can't go and buy a newspaper without being (.) approached by some student with a clipboard. (Jurassic Coast Project Officer, Dorset County Council)

The threat of environmental damage at honey-pot sites, for example the erosion of cliffs at Lulworth Cove and damage to the sand dunes at Studland, has led to demands for the promotion of additional and alternative sites for educational visitation.

[4] The landforms cited within textbooks which correspond to honey-pot sites for educational visitation are Old Harry Rocks, Chesil Beach, Lulworth Cove and Studland.

4.2.2.1 The promotion of alternative Dorset sites for fieldwork

Weymouth and Portland Borough Council has recently embarked upon a programme to attract educational visitation to the Isle of Portland, an area currently overlooked by many groups. Portland incorporates impressive landslide features (Kimber, 1998) and limestone quarries which are of both geographical and geological significance. The promotion of the educational interest of Portland constitutes an attempt to bring fieldwork groups – and therefore money – into the area. The council has produced a teaching resource from which fieldwork schemes may be developed, encouraging teachers to utilise this stretch of the coastline. The programme has generated extensive support amongst teachers and throughout the county, not only because it may contribute to the failing economy of a post Ministry of Defence site, but also because it may move the focus of the island away from its current primary employer, HM Prison Service:

> It's an excellent way of (.) developing (..) a very little used (..) patch of the Dorset coast (.) other than by prisoners and (.) suchlike! (National Trust Education Officer, Purbeck)

The promotion of alternative sites for fieldwork may go at least some way to reduce the pressure placed upon more widely used sites and landforms but first, the educational status attached to honey-pot sites must be overcome. Alternative sites such as the Isle of Portland may be equally valid for the study of processes and landforms within curricula, but teachers may consider that their students are missing out on a key element of geographical education if they do not visit landforms such as Lulworth Cove and Chesil Beach. Indeed, such sites create an inspiring setting for geographical learning. In addition, information and resources – including textbooks – concerning Dorset's honey-pot sites are plentiful. Teachers may be reluctant to embark upon the lengthy task of organising fieldwork exercises for new sites (Rawling, 1996*a*, 1999). "It can take up to three weeks in classroom time to set up a one hour (..) fieldwork exercise or a two hour fieldwork exercise" (Head of Geography, Dorset secondary school).

The lack of resource support was the reason behind the failure of one educational group to adopt an alternative site for field investigation. A secondary teacher from Kent utilised a case study from Weymouth and Portland Borough Council's Portland Fieldwork Guide to conduct a fieldwork exercise on the Isle of Portland. However, despite the materials provided within the resource, the teacher complained of a lack of supporting information from other sources and experienced difficulties relating the site to themes within the GCSE syllabus. The following year the group returned to Lulworth Cove.

The educational reputation of honey-pot sites is widely recognised amongst teachers and field studies centre staff:

> I: Why do teachers like to take their groups to sites like Lulworth and Studland (..) even though they are always so crowded?
> R: Dorset sites are such classic sites. Teachers don't *want* to switch to alternative sites. (..) If they were just average, teachers might consider changing. (.) But because they are so classic, teachers want to use them. (Head of Geography, Oxford secondary school)

> If you say 'Lulworth', or if they see a picture when I do the teacher preview weekends or conferences, they see a picture of Lulworth or Durdle Door and you can see them spark up - oooh (..) ooh, ooh that's in the, ooh, I've seen papers on that. So yep, they're very keen to go there. (Tutor, 3-D Educational Adventure)

To reduce the pressure placed upon honey-pot sites by educational visitation it may be necessary to reconsider the examples cited within geography textbooks and syllabuses. However, such an extreme approach may meet with opposition amongst educational providers. Instead, fieldwork co-ordinators in Dorset have suggested that the distribution of adequate resources for alternative sites and the option of input from local experts (rangers and field studies centre staff) might encourage teachers to diversify their fieldwork options:

> On the (.) um (.) education side, it really is a matter of (..) you know, (.) identifying the opportunities, the sites, and then providing (.) a *range* of resources in such a way that (.) teachers can easily manipulate them into what they want. (Jurassic Coast Project Officer, Dorset County Council)

> It's up to us to try and find alternative sites, and to encourage groups to use (.) any of the sites at different times of year (.) to try and spread the (..) spread the load (.) both in time and space. (...) So that the (.) the assumption that if you're doing (..) um (..) geography fieldwork it's got to be in June and it's got to be in Lulworth (..) we can begin to wean people off those (.) preconceived ideas. (National Trust Education Officer, Purbeck)

4.2.2.2 The virtual fieldtrip

Problems of overcrowding at key sites, coupled with declining grants and the increasing safety concerns of fieldwork (Foskett, 1997; Smith, 1999), may alternatively prompt teachers to use IT to enhance elements of field-based geographical learning. Advances in technology have allowed the development of the virtual fieldtrip (Lemke & Ritter, 2000; Stainfield *et al.*, 2000), an Internet resource providing site-based textual and visual data in a quick and accessible IT format (Newnham *et al.*, 1998). Dr Ian West from the University of Southampton has produced a series of virtual fieldtrips which focus on the Dorset coastline. The fieldtrips include text, photographs and diagrams highlighting the geographical and geological interest of key and alternative sites along the coastline (West, 2000). The establishment of the virtual fieldtrip as a viable option for geographical teaching may be assisted by the Labour government's 1999 pledge to connect every school in Britain to the Internet and by the Computers in Teaching Initiative (CTI) which acknowledges the benefits of IT contributions to higher education learning (Chalkley *et al.*, 2000; Gardner, 2000). Internet-based learning may be particularly effective amongst students due to the popularity and accessibility of IT media (Bale, 1996; Lemke & Ritter, 2000). It may also contribute to the creation of links between formal geographical education and student's popular interests.

In addition to the virtual fieldtrip, IT may be employed within geographical learning to demonstrate the dynamic properties and processes of fieldwork, a feat seldom achievable in the field. Using software such as *GeographyCal*, processes which in reality occur over millions of years may be visually accelerated and observed in a few minutes. IT reconstruction may be employed in conjunction with fieldwork, allowing students to observe processes which have created the landforms encountered in the field. Indeed, Phipps (2000; see also Lemke & Ritter, 2000; Stainfield *et al.*, 2000) suggests that the value of IT as a replacement to fieldwork is limited due to the lack of physical and memorable experiences it incorporates. However, it may play a part in supporting and enhancing field-based learning, preparing students for encounters in the field and providing an opportunity for reflection. The combination of IT and fieldwork may reduce the time spent at a site, alleviating problems of site congestion and damage. The introduction of a less physically-demanding approach to geographical fieldwork may also enhance the learning experiences of students who are marginalized by traditional fieldwork encounters, for example students with special needs and those who are constrained by specific religious and cultural beliefs.

The encouragement of alternative site use and the inclusion of elements of IT and 'virtual fieldtrips' within field-based geographical learning may be considered to add a degree of variability to otherwise fairly homogeneous site and landform encounters in Dorset. The prominence of honey-pot sites within fieldwork teaching and the frequency of their visitation amongst education groups suggests that students visiting the Dorset coast may experience a similar sequence of settings for learning. However, variability may arise from additional sources. For example, a diversity of fieldwork encounters may be constructed from individual teachers' decisions concerning the organisation and direction of their fieldtrips.

4.2.3 Organising fieldwork encounters: provisions for educational groups visiting the Dorset coast

Variability in the fieldwork encounters of student audiences may arise from the diversity of provisions and facilities available to educational groups within Dorset. Accommodation, the balance of fieldwork activities and the length of the trip, the level and type of teaching input and the use of local interpretation provisions each represent flexible options within fieldwork organisation. Fieldtrip structures may be influenced by the age of the students, the level of specialism possessed by the teacher and by financial considerations.

The accommodation available to educational groups in Dorset is itself diverse. Of the groups encountered within this study, four were staying in field studies centres, four in hotels or guesthouses and three in youth hostels. The remaining two groups were visiting Dorset for the day. Schools' financial circumstances may have a particular influence upon their accommodation choices. Differences in cost for a four-night fieldtrip are considerable, ranging from £230 per student (1999 prices) at a field studies centre including input from centre staff, to just £70 per student at a youth hostel. Teachers may also possess individual accommodation preferences. Teachers from Essex and the West Midlands opted to stay in guesthouses as it allowed them flexibility and control of their teaching regimes. A teacher from Oxfordshire gained similar benefits from choosing to stay at Burley Youth Hostel, located a short distance over the Hampshire border. Groups based at hotels and guesthouses in particular may utilise similar facilities and resources to tourists, and fieldwork may thus contribute to an extension of the existing tourism season into the shoulder months of the summer.

Preference was expressed amongst other teachers for the opportunities provided by field studies centres. An A-level group from Kent benefited from the teaching input of centre staff, while a year six group was drawn by the outdoor pursuits and evening activities offered. The fifteen field

studies centres located along the Dorset coast vary considerably in terms of their facilities and specific fieldwork emphases. Hooke Court near Beaminster specialises in teaching geography alongside history and possesses extensive facilities for outdoor pursuits. The Allnatt Centres in Swanage are highly field-orientated and have "a very definite policy about being outdoors at every chance" (Tutor, the Allnatt Centres). Of particular interest for its alternative approach to fieldwork provision, however, is 3-D Educational Adventure. Located in Osmington Bay near Weymouth, the centre resembles a holiday camp in size and layout and has superior facilities, extensive grounds and a private beach. Its educational focus is upon fieldwork in combination with IT and students are equipped with palm-top computers for data collection in the field. Foskett (1997) argues that the use of IT in fieldwork reduces the amount of time students may spend on data processing, enabling them to focus upon more important fieldwork aspects such as inquiry, skills development and interpretation. IT may also enhance students' enjoyments of fieldwork (Bale, 1996).

Staying within a field studies centre, teachers have the option to employ the specialist skills of centre staff to supplement or replace their own teaching. At Key Stages 1 and 2, teachers may be responsible for the entire curriculum and specialism in geography at this level is rare (Bowden, 1990; Clark, 1996; Hawley, 1996; Ballantyne, 1999). Teachers may feel unqualified to teach geography in the field (HMI, 1989; Binns, 1996; Rawling, 1996*a*), hence may prefer to enlist the assistance of centre staff. A tutor from 3-D Educational Adventure highlighted the benefits of field studies centre teaching:

> The beauty of it is because you *are* a teacher, you don't have time to find a locality, you don't *know* the locality, so you can't really teach it. So the staff here have (.) um (.) local knowledge as well as the (.) um (.) basic academic knowledge. (Tutor, 3-D Educational Adventure)

At secondary level, field studies centres may provide students with specialist local knowledges. The A-level syllabus is extensive and teachers may employ centre staff to teach aspects of the course with which they are not

wholly familiar. A local teacher who lived in Dorset and held a PhD in educational geography still preferred his A-level students to benefit from the specialist knowledges of local experts:

> I would certainly make use of [centre staff], simply because my own knowledge in many respects is limited. I'm not a geologist, I mean I play at it with the kids and I get by with (.) kids up to 16, but my (.) A-level geology is another matter. So you need specialist input (..) around here. (Head of Geography, Dorset secondary school)

Teachers may predetermine the extent to which they require local expert input to fieldwork teaching, tailoring their fieldtrip organisations to the demands of different groups.

The numerous options available for fieldwork provision and organisation in Dorset reflect the popularity of the coastal landscape for geographical learning. Fieldwork choices enable the individual teacher to select facilities and resources appropriate to their style of teaching, or which they feel may produce most benefits for their students. Provisions for formal educational experiences in Dorset set the scene for further study of the variable approaches to fieldwork teaching, and of the diversity of student encounters, learnings and experiences of geography in the field.

4.3 Formal geographical learning within a fieldwork setting

Field-based approaches to formal geographical education may be affected by issues of representation. Fundamentally, questions may surround the uncertain relationship between the compartmentalised and frequently process-based curricula of formal learning and the diverse environmental realities of fieldwork settings. Teachers may choose to overcome difficulties of compartmentalised and process-based learning in variable ways creating a diversity of student encounters. The implications of different approaches to fieldwork teaching for student learning, cognition and subject appreciation are explored within this section. Students' encounters with geography through

fieldwork have the potential to add value to formal geographical education and to influence students' perceptions of geography as a subject for further study.

4.3.1 Pedagogic representations of reality: a geographical synthesis?

Physical geography is primarily concerned with the study of landforms and of the geomorphological processes which interact to create these landforms (see for example Clark *et al.*, 1987). The study of physical geography involves the application of ideas, concepts and models in the interpretation of landscapes and structures (Unwin, 1996). In the field, landscapes are complex and rarely represent a single process or theory. However, GCSE and A-level syllabuses show a tendency to compartmentalise and separate different themes and topics (Marsden, 1997; Palmer, 1998).

The secondary examination syllabuses presented within *Tables 4.iii* and *4.iv* represent the separation and compartmentalisation of processes and features which may be encountered in formal geographical education. Compartmentalisation is seldom reflected in the field, where different processes interact and overlap within the same landscape. Sites rarely demonstrate processes of erosion, deposition or sediment transport alone and students may thus be confronted in the field with a reality that fails to conform to the disassociated topics addressed within syllabuses. A fluvial morphology undergraduate at the University of Florida has highlighted the problems that compartmentalisation and simplification of geographical phenomena may present for students:

> Students spend the majority of their education involved in learning concepts that are often overly generalized in textbooks so that these concepts can be applied to a variety of localities and conditions. This becomes a problem when students go into the field for the first time. (Mossa, 1995:84)

Unit 1: People and the Physical World
Coasts
• Coastal erosion, transport & deposition processes and the landscapes they produce.
• Landscape features of erosion: cliffs, headlands, caves, arches & stacks. Processes of transport, longshore drift. Landscape features of deposition: beaches, spits, bars & tombolos, e.g. Gower Peninsular, South Wales or Purbeck coast of Dorset.
• The causes and effects of coastal erosion. Attempts to control erosion.
• One case study, e.g. Holderness coast, North Humberside or Barton-on-Sea, Hampshire or the coast of Holland.

Table 4.iii: GCSE syllabus: OCR *Geography 'A'* (OCR, 2000).

1.3: Coastal Environments
1.3.1 Coastal processes create characteristic landforms
• The processes of marine erosion, transportation (longshore drift) & deposition.
• The factors influencing the rate and location of these processes, to include marine (including refraction), atmospheric, geological & human factors.
• Landforms of coastal erosion, to include cliff, wave-cut platform, headland, bay, cave, arch, stack, stump.
• Landforms of coastal deposition, to include beach, spit, on-shore & off-shore bars, tombolo & cuspate foreland.

Table 4.iv: A-level syllabus: Edexcel *Geography 'A'* (Edexcel, 2000).

Compartmentalisation may be compounded by teachers' attempts to reduce the complexity of sites to assist field investigation. The pedagogic benefits of fieldwork settings for teaching and learning (Pinet, 1989) are such that several topics and themes may require field-based input. Teachers may thus adopt a 'checklist' approach to teaching, constructing a compartmentalised list of topics for completion similar to that which might be encountered within a curriculum or syllabus:

> We do erosion, we do (.) agents of erosion and transport (.) along the beach (.) measuring longshore drift and that sort of thing. (..) We do work on tourist honey-pot sites (...) We do an urban study and we do a farm study. (.) So they've seen the sort of five different areas of the syllabus. (Head of Geography, Dorset secondary school)

> The schools come and they want to (..) do something that (...) then tick off a couple of things and say we've done that aspect of the National Curriculum (.) we've sorted that. (Geological expert, Dorset Museum Advisory Service)

The misrepresentation and simplification of geographical reality may create confusion amongst students, an occurrence clearly demonstrated through the example of Mudeford Spit. The spit is located across the entrance to Christchurch Harbour in East Dorset and is a relatively popular site for study by educational groups. However, the site may not correspond to representations of spit development contained within syllabuses and textbooks. An extract from a key A-level geography textbook suggests that spits develop primarily as a result of longshore drift:

> Because the prevailing winds and maximum fetch are from the southwest, material is carried eastwards by longshore drift. When the orientation of the old coastline begins to change, some of the larger shingle and pebbles are deposited in the slacker water in the lee of the headland. As the spit continues to grow, storm waves throw some larger material above the high water mark making the feature more permanent. (Waugh, *Geography - An Integrated Approach*, 1990:122)

On initial inspection, the development of Mudeford Spit (*Figure 4.v*) might be attributable to processes of longshore drift. The accumulation of sediment on the western margins of the groyne system indicates that longshore drift is ongoing, and the spit extends eastwards into the harbour. Yet there is an added complication. An additional spit, labelled Mudeford Quay, stretches across the estuary mouth from the opposite headland. Reasons for the development of this secondary spit are unclear. There is no firm evidence for a counter-drift system, although the increased frequency of south-easterly winds in the spring could create a degree of westerly drift (Hawes, 1998). Alternatively, the spit may have developed as variable water velocities in the vicinity of the estuary bring materials into Christchurch Harbour and deposit them in the lea of the headland. Deposited sediments may have accreted to form the spit. As a final proposal, Mudeford Quay may have existed as an easterly extension of Mudeford Spit which was breached

Figure 4.v: Mudeford Spit and Mudeford Quay, two spits located across the entrance to Christchurch Harbour.

by the sea to create two separate structures. Mudeford Spit may thus have developed as a result of longshore drift, although it is more likely that the process is one of several in operation. In describing the site, teachers face the dilemma of whether to simplify, adhering to the explanation of spit development proposed within the textbook, or whether to explain the conflict of opinions regarding the parallel spit development and risk confusing the students.

The simplification of a site such that it illustrates a single pedagogic theme of physical geography may enable students to construct individual associations between sites and processes, assisting memory and recall. However, simplification risks the accusation that teachers are 'force-feeding' a particular idea to students. For instance during a guided walk with a group of year six pupils from Hertfordshire, the ranger at Studland explained the processes of sand dune formation and vegetation succession operating at the site. He suggested that originally, the process of longshore drift was thought to be instrumental in the development of the sand dune ecosystem but it had since been recognised that a combination of factors was responsible. Here, the teacher interrupted the ranger and asked him to pursue the topic of longshore drift. The pupils had covered the process in lessons prior to their trip and the introduction of further detail might confuse them. The teacher's demands represented a desire to over-simplify the site to the extent that incorrect information was communicated. The teacher showed preference for the study of a geographical model over the reality of a field situation.

A site that produced particular problems amongst teachers was Chesil Beach. The famous barrier beach has confounded geographers for years and the mechanisms of its formation remain unclear. The variable theories proposed for its formation involve a combination of processes that do not conform to a single theme or topic within geography curricula. One theory suggests that Chesil Beach formed as a bank of shingle on an exposed sea floor during a period of low sea level, and was subsequently driven onshore by wave action as sea level rose at the end of the last Ice Age (Brunsden &

Goudie, 1997; see also Carr & Blackley, 1973). However, research into the feature continues and new evidence constantly reveals additional factors in the formation of this unique feature. Uncertainties also surround the processes and mechanisms which maintain the structure in its current form. Pebbles on the beach are graded in increasing size from west to east as a result of the predominantly south-westerly wave climate. The location of Chesil Beach in a position of maximum fetch and wave energy is thought to be a contributing factor, but factors such as sediment availability, transport size threshold and boundary shear stress are also implicated (Brunsden & Goudie, 1997).

The complexity of Chesil Beach creates problems for teachers in terms of both the construction of valid explanations for students, and the development of fieldwork exercises for the measurement and observation of processes. Constantly changing theories about the structure's development force teachers to consult and decipher up-to-date academic reports, a time-consuming process which may create particular difficulties for non-specialist geography teachers. An A-level teacher from the West Midlands encountered obstacles to the interpretation of Chesil Beach, hence instructed his students to consult secondary sources for data collection:

> Chesil Beach Centre: listen to audio presentation of the formation of Chesil Bank, study maps, photographs and other resources, use the CD-ROM and ask the staff some questions! (Extract from A-level fieldwork resource, West Midlands secondary school)

The teacher thus avoided teaching a subject with which he had some uncertainties, and overcame the necessity to keep up-to-date with academic research in the face of little available time (HMI, 1989; Binns, 1996; Rawling, 1996*a*).

In contrast, a geography teacher from a Dorset secondary school recounted a field exercise he had undertaken with a group of year ten students to demonstrate the complexity of landforms and the integration of simultaneous processes in the field. The group constructed a hypothesis

stating that 'wave action is responsible for the features found along the coastline'. The group were taken to a location in Purbeck, where it became apparent that although wave action was in part responsible for the features observed, other factors including the wind and rain, human activity and chemical weathering had contributed to the observed landscapes of the site. The failure of the hypothesis indicated to the group that physical geography models and theories are not infallible, that landforms frequently result from an interaction of factors. Models are necessarily simplifications of reality.

The two different approaches to overcoming problems of compartmentalisation demonstrated within these examples represent the construction of variable fieldwork encounters. In former cases, teachers reduced the complexity of sites to a simplistic, checklist framework. Despite the possible cognitive benefits of establishing site-based associations, this approach risked 'force-feeding' students who may subsequently develop misinterpretations and misunderstandings of geographical knowledges. In the latter case, the teacher worked with the complexity of a site to demonstrate the disparity between geographical pedagogy and geographical reality. However, with this approach students may face uncertainty as to the relationship between models and reality, and which to pursue within learning. Assessments of the values of fieldwork to geographical education frequently overlook the disparity between the simplified models and explanations provided within formal geographical education and the complexity of processes and landforms evident in the field. Whereas many teachers may successfully bridge this gap, others may succeed merely in creating misunderstanding and confusion amongst students. Variable pedagogic frameworks for compartmentalised learning may thus create a diversity of fieldwork encounters.

4.3.2 Representation of process and the active – inactive debate

Alongside concepts, themes and models, physical geography relies to a high degree upon the study of process (see for example Clark *et al.*, 1987;

Goudie *et al.*, 1994). Physical geography topics within the National Curriculum, syllabuses and higher education incorporate the study of processes including river systems, ecosystems, tectonic movement and glaciation. In Dorset, processes encountered within formal geographical education include coastal systems, landform evolution, erosion, deposition and sediment transport. With the exception of dramatic events, for example the large-scale landslides which occurred between Charmouth and Lyme Regis in December 2000 (Mendick, 2001), the timescales over which these processes operate are extensive and there is little evidence within the field that they are ongoing. Further questions may thus be raised of the extent to which fieldwork represents physical geography, and how teachers may overcome obstacles to process-based learning.

Mechanisms linking process and landform are seldom observable in the field due to the extensive timescales over which they may operate (Brunsden & Thornes, 1979). However, the application of time-space substitution – the 'ergodic hypothesis' – to field exercises may enable the study of systematic processes through observation of variability over *space* rather than *time*. The hypothesis suggests that "under certain circumstances sampling in space can be equivalent to sampling through time" (Goudie *et al.*, 1994:186; see also Chorley *et al.*, 1984). Time-space substitution is thus a useful tool with which teachers may demonstrate processes of landform evolution. Glock (1931) has applied the principles of ergodicity to the study of drainage basin evolution; Chorley *et al.* (1984) have employed the method in the study of sequential slope development through erosion of a sea cliff.

In Dorset, the concept of time-space substitution may be applied to study of the coastline's erosional features. Chalkland stretches of the Isle of Purbeck incorporate features representing the sequential erosion of resistant *rock cliffs* (*caves*, *blowholes*, arches, stacks and stumps), as listed within the OCR *Geography 'A'* syllabus for GCSE (OCR, 2000). The features, including the well-known stacks of Old Harry Rocks, represent progressive stages in chalk cliff erosion and may be studied at variable points along the coastline. An A-level class from Berkshire studied the sand dune ecosystem at

Studland using principles of time-space substitution. Here, assuming that models of sequential sand dune development are correct, the theory suggests that the oldest dunes at the back of the system have evolved through all the stages of sand dune development lying before them. Through study of the ecosystem over space, temporal stages in sand dune evolution may be investigated and compared to develop an understanding of the processes in operation. The Berkshire group employed fieldwork techniques to measure variations in size and composition across the sand dune system and to map vegetation succession. Findings were converted to represent processes of sand dune evolution over time. However, time-space substitution is not applicable to every field situation (Chorley *et al.*, 1984). Moreover, it was employed by only one of the groups encountered.

4.3.2.1 Active / inactive learning

For the purposes of teaching process-based physical geography in the field, two pedagogic approaches were encountered amongst educational groups, based upon concepts of *inactive* and *active* learning (Pinet, 1989; Foskett, 1999; Fuller *et al.*, 2000). Inactive learning involves a 'staff-centred' approach to teaching (Fuller *et al.*, 2000), with groups partaking in a 'Cook's tour' of many sites (Gold & Haigh, 1992; Stainfield *et al.*, 2000) and comparing landforms and processes. Teachers may use the field as an extension to the classroom (Pinet, 1989) 'feeding' students with information regarding the landforms and sites (Rees & Harris, 1973). Inactive fieldwork encounters enable students to observe a number of variable landforms whilst processes of their formation are explained, forming valuable cognitive connections between the sight of the landform and the physical processes of geography. However, student participation is rare, with activities reduced to drawing and annotating field sketches, writing notes or taking photographs. The information collected may provide students with background materials for examination case study examples.

In contrast, active learning in the field is considered to involve the employment of variable fieldwork techniques in the measurement of the

processes responsible for landscapes and formations observed (Dyas & Bradley, 1999). Active learning constitutes a more 'student-centred', 'hands-on' approach to physical geography (Fuller *et al.*, 2000), with students collecting their own data for field investigation (Clark, 1996). Physical geography processes may operate on timescales too great for observation in the field, but the use of fieldwork techniques may enable some measurements to be made, for example of pebble grading at Chesil Beach or of the erosion of cliffs at Hengistbury Head. On active fieldtrips, students may have 'ownership' of their work in that they plan and undertake data collection themselves (Higgitt, 1996), gaining invaluable experience in the use of fieldwork techniques for GCSE or A-level coursework. Participatory and student-centred activities may also provide the opportunity for students to acquire broad transferable skills such as problem solving and teamwork, and to develop motivation and confidence in learning (Leat, 1996; Chaplain, 2000). However, active learning may create obstacles to the disentangling of reasons for fieldwork. Are students in the field to learn about the site or to develop their fieldwork techniques?

Fuller *et al.* (2000) describe a continuum between inactive and active approaches to learning in the field, involving varying degrees of instruction and participation. Although they suggest that there is not necessarily a clear distinction between the two approaches, extreme cases were encountered within this study. A-level students from Devon were taken on a day-trip to Dorset by minibus, visiting five sites in the morning and a further three in the afternoon. The purpose of the trip was to observe landforms and to be provided with information regarding sites, rather than to collect primary data. A large proportion of the day was spent on the minibus. Many of the students appeared to become restless, complaining about the number of sites visited and the amount of information they were expected to assimilate. Several became disruptive and boisterous and were reprimanded by the teacher. The students' discontent may have been heightened by feelings of boredom related to their inactive and non-participatory fieldwork experiences. Similarly, a year nine class on a day trip from Oxfordshire travelled the whole length of the Dorset coast from Bournemouth to Charmouth and visited four honey-pot

sites. The teacher described this as a non-participatory 'walk and talk' trip, designed to introduce students to the area. However, the majority of the day was spent travelling and it thus did not constitute a very productive learning experience. The National Trust Education Officer for Purbeck emphasised the inefficiency of day fieldtrips conducted by schools located at such a distance from Dorset:

> There are also a great many [school groups] that come (.) on *day* visits from as far afield as (.) Oxfordshire, (.) London, (.) Bristol. (..) Crackers, really. (.) Five hours in the bus for three hours work. It's stupid!

When long trips and time spent travelling are coupled with inactive approaches to fieldwork – such as those described above – the results are widely criticised. Pinet (1989; see also Rees & Harris, 1973) suggests that inactive learning may fail to engage the cognitive and affective benefits frequently attached to active learning experiences. Indeed, several individuals involved in fieldwork co-ordination in Dorset suggested that inactive (passive) approaches to fieldwork could be detrimental to learning. Rapid progression between sites may also generate a lack of spatial awareness amongst students, confusing the boundaries of sites and learning experiences:

> These poor kids are bussed all over the county, (..) clogging up the roads and they're spewed out on the different places. (..) And I (.) when I worked at Charmouth (.) there were several times when we could see that the kids had actually come from (.) from Bournemouth in the afternoon er in the morning, they'd stopped in Dorchester on the way through (.) and now they're in Lyme Regis and they haven't got a clue where they are. (Jurassic Coast Project Officer, Dorset County Council).

> A lot of it's whistle-stop tours (..) you know, they're flying in and flying out (...) and the children could benefit so much more from a longer visit. (Tutor, Leeson House Field Studies Centre.)

The assumption that fieldwork adds value and enjoyment to geographical learning (Ballantyne, 1999; Stainfield *et al.*, 2000) may not be reflected within inactive fieldwork encounters. Periods of inactive fieldwork may generate

boredom and frustration amongst students, creating a negative fieldwork experience which affects geographical learning and students' perceptions of geography. The diversity of pedagogic approaches to fieldwork may thus create a significant gap between highly effective and relevant encounters and those which may be regarded as detrimental to learning.

In contrast to the inactive encounters described, the secondary school from Kent employed a very active approach to fieldwork. The school brought groups of students from years ten and twelve to the Dorset coast and encouraged them to play an active part in the development their personal geographical knowledges. The students participated in variable fieldwork exercises and approaches to collect geographical data. For GCSE students, data from fieldwork contributed to the completion of a piece of coursework which explored the effects of tourism on the landscape of Lulworth Cove. The students were provided with a list of data to collect at the site and were instructed on more technical aspects of data collection such as beach profiling and monitoring footpath erosion. They were subsequently left to complete tasks independently in small groups. It was to the students' personal detriment if data was not collected and their knowledge of this encouraged the group to achieve a significant amount over a short period of time.

In justifying his active approach to fieldwork provision, the teacher accompanying the Kent groups stated that participation and involvement in data collection resulted in the development of important geographical and broadly motivational skills amongst students. He added that that they were more likely to learn through "actually doing some fieldwork themselves" (geography teacher, Kent secondary school). The responses of students to the fieldtrip confirmed that they frequently preferred and found most enjoyable those exercises in which they held personal responsibility for data collection:

> I enjoyed the Decision-Making exercises because we had to decide for ourselves about what happened. (Male student, 15; Kent secondary school)

> Country park management was not as interesting because you did not collect as much information for yourself. (Male student, 15; Kent secondary school)

Thirteen (87%) of the fifteen students from the group stated that they had enjoyed their fieldtrip. This compares to only sixteen (52%) of the thirty-one A-level students who had attended the more inactive trip. All of the students on the active trip claimed that they had understood the work, with one-third adding that the fieldtrip had helped them to develop broader understandings of geographical topics. In contrast, one-fifth of students on the inactive trip mentioned that they had encountered difficulties in understanding the materials covered on the fieldtrip. Although not conclusive, the findings infer that active approaches to fieldwork may enhance students' understandings of geographical concepts, and may frequently be more enjoyable than inactive methods. Students' enjoyments of fieldwork encounters may heighten their perceptions of geography as a subject for future study.

Research into the cognitive effects of variable pedagogical approaches has generated increasing support for active learning methods. Foskett (1999:160; see also Mackenzie & White, 1982; Fuller *et al.*, 2000) notes the "additional cognitive gain from 'active' as opposed to 'passive' fieldwork". Nundy (1999; see also Mossa, 1995; Foskett, 1999) suggests that positive cognitive outcomes may arise from the interactive and participative approaches to learning adopted within the active fieldtrip. The experiential aspects of fieldwork may also support learning within the affective domain (Harvey, 1991). "The importance of affective development in supporting cognitive development suggests that learning in an environment which can promote social and personal development may be an important accelerator to learning" (Foskett, 1999:160). Affective experiences may enable students to attach greater meaning and understanding to geographical learning encounters in the field.

Despite the acknowledged benefits of active learning, evidence obtained from Dorset fieldtrips suggests that it may be possible to overburden students with fieldwork activities. A GCSE teacher from Essex

attempted to incorporate as many exercises, talks and sites into the fieldtrip as the time permitted. In the morning, the group attended a ninety-minute talk given by a ranger at Studland, then completed a management evaluation of the sand dune system plus an assessment of tourist facilities at the site[5]. That afternoon, the teacher led the group on a four-mile hike during which they studied the different rock types of Purbeck and conducted an environmental appraisal at a quarry site. The purpose of the exercises was to collect data for a management project based upon the Isle of Purbeck, a significant component of the OCR *Avery Hill* GCSE syllabus. However, on a hot day in June the teacher's enthusiasm was not enough to sustain the interest of many of the students. Attempts to complete the set tasks became increasingly half-hearted as the day progressed. Higgitt (1996) suggests that if students are overburdened with information, they may become 'selectively negligent' with their learning. Complaints about the heat, the work and the walk rose significantly by the end of the day, suggesting that despite the assumed cognitive benefits of interaction and participation in fieldwork, the inclusion of too many physical activities may marginalize and intimidate some students, to the extent that their learning experiences and enjoyments may be impaired.

However, active approaches to fieldwork need not incorporate only the physical and technical aspects of investigation. The A-level group from the West Midlands adopted an approach which at first glance might be considered inactive. The group visited several sites and heritage centres, collecting information for the completion of three practice A-level questions on their return to school. Yet the content of the fieldtrip was such that it undoubtedly incorporated an active approach to *learning.* Data collection had a clear structure and purpose, the importance of which has been stressed by Bartlett (1999). In addition, the group discussed the different landforms and management schemes encountered rather than passively assimilating the information provided by teachers or rangers. Pedagogic interactions and the sharing / exchange of ideas and findings within an informal learning

[5] The assessment included the completion of tourist questionnaires, 'people plots' and sketch maps of the site and facilities.

environment are supported by educational researchers on account of their positive cognitive implications:

> A field excursion where all individuals interact and discuss issues provides more effective learning for the individuals, the class and the instructor. (Mossa, 1995:83; see also Fuller *et al.*, 2000)

The pedagogical approach adopted within the West Midlands trip contradicts the notion that to constitute a valid active encounter, students must partake in physical exercises to measure and monitor the landscape. Active approaches to learning may incorporate personal interactions in the form of discussion and similarly more personal, cognitive interactions with the landscape that do not require the use of physical fieldwork techniques. In this case, the fieldtrip constituted an informal, interactive setting for geographical learning. Each of the thirteen West Midlands A-level students stated that they had enjoyed their fieldwork experiences and had understood all of the work undertaken in the field.

The degree to which a fieldtrip incorporates elements of active and inactive learning may create a diversity of geographical educational encounters, with a bearing upon student motivations and enjoyments (Pinet, 1989). Approaches to learning may also affect the geographical understandings and knowledges developed amongst students (Higgitt, 1996). However, observation of fieldtrips has resulted in the acknowledgement that the 'success' of the trip in terms of student learnings and experiences is not solely dependent upon the degree to which fieldwork is active or inactive. Personal interactions with students, the representation and communication of geographical themes (Lonergan & Andresen, 1988; Davidson & Mottershead, 1996; McEwen, 1996), the setting of clear aims and objectives to study (Wendling, 1989) and the incorporation of a range and balance of activities (Catling, 1999*b*) may contribute to the 'success' of a fieldtrip. In addition, Foskett (1999; see also Mackenzie & White, 1982; Nundy, 1999) suggests that social interactions and encounters may create more enjoyable fieldwork experiences amongst students, contributing cognitive benefits through

accelerated learning within the affective domain (Gagné & White, 1978; Leat, 1997) and enhancing students' perceptions of geography as a subject for formal study.

4.4 The contribution of social and personal interactions to 'the fieldwork experience'

Studies of the effectiveness of fieldwork have focused predominantly upon its cognitive contribution to geographical learning (see for example Mackenzie & White, 1982; Mossa, 1995; Foskett, 1999; Nundy, 1999; Fuller *et al.*, 2000). Fieldtrips may constitute invaluable learning experiences for students. However, fieldwork also provides the opportunity to link formal geographical education to interests and social activities encountered outside the classroom (Wass, 1990; Clark, 1996). Nairn (1996:88) suggests that "fieldtrips provide a unique site in which to explore both the social relations of teaching and of learning geography". The juxtaposition of environmental encounters and social interactions may create positive conditions for geographical learning through the affective domain. "Learning is done on, with, and through the body as well as through interaction with other students and with the environment" (Nairn, 1999:273). Stainfield *et al.* (2000:255; see also Ballantyne, 1999) recognise that the fieldtrip may constitute an enjoyable and rewarding aspect of formal geographical education which may influence students' decisions to pursue the subject within secondary and higher education:

> There is little doubt that this form of teaching and learning is popular with both students and staff. It is seen as providing different insights and learning experiences from those provided by a lecture or practical, as well as being a unique social experience, including the building of group identity, team spirit and good staff-student relationships.

Observations of fieldtrips and student questionnaire responses established a recognition that non-academic experiences may make a significant

contribution to geographical encounters, indicating the importance of 'the fieldwork experience'.

4.4.1 'The fieldwork experience'

> I mean everything we're about here is actually taking children out on fieldtrips. (.) And they do benefit just from going and seeing it in real life and being out-of-doors, and the *whole experience*. (Tutor, Leeson House field studies centre)

A significant component of residential geography fieldtrips is that of 'the fieldwork experience'. The term relates to the variable social aspects of fieldtrips, including interactions between classmates and the sharing of learning experiences (Wass, 1990; Clark, 1996; Nairn, 1996, 1999). It may have a significant bearing upon affective geographical learnings and upon personal / social developments. For primary and secondary students, the fieldwork experience may differ considerably.

On primary school fieldtrips, social and developmental opportunities may arise primarily from the activities undertaken. Activities may often be comparable to those enjoyed by a child in his or her leisure time, for example fossil collecting and sandcastle building, or the discos and barbecues arranged by some field studies centres. Linking everyday experiences and popular activities with geographical learning may have a positive influence upon student cognition, allowing the development of connections between new and existing knowledges (Mackenzie & White, 1982; Stevenson, 1993). For primary school children, the experience of staying away from home may be unfamiliar and the fieldtrip may thus constitute an invaluable opportunity for the development of social behaviours including domestic skills such as sharing a room, making a bed and clearing up after meals.

Within a group of year six pupils from an independent school in Hertfordshire, there were several individuals for whom the fieldtrip was an entirely new encounter. Many of the pupils had spent their summer holidays

abroad in hotels or second homes, experiences quite different from a Youth Hostel in Swanage. One pupil mentioned that she had never visited the British seaside before, despite spending every summer on the beach in Portugal. At another school, the fieldtrip was a new experience for pupils whose parents had previously been reluctant – for financial, religious or other reasons – to allow their children to spend time away from home. Thirteen children from the Buckinghamshire year six class had not been permitted to join the trip, eight of whom were from Asian backgrounds. Pettus (1976), Wendling (1989) and Vosniadou (1994) highlight that environmental attitudes may vary considerably between different cultures and backgrounds. Parents from some cultures may not attribute great value to the environmental experiences of a school fieldtrip, especially in the light of constraining religious beliefs. The contrast between the two schools was considerable; both groups included pupils who had not previously encountered the (British) seaside but for very different reasons. The fieldtrips constituted significant learning and experiential encounters for both.

The example of primary students from variable social and cultural backgrounds indicates that fieldwork may not always constitute such a broadly motivational and widely enjoyed approach to formal geographical learning as is frequently suggested (see Ballantyne, 1999; Stainfield *et al.*, 2000). Students from diverse backgrounds may possess differing preferences and expectations, and fieldwork experiences may fail to establish links with such variability. Students may thus become marginalized from geographical learning opportunities, for example the Asian children who were not permitted to attend a residential fieldtrip due to religious constraints. Fieldwork may also be considered an approach towards the connection of formal education and popular experience. However, the previous encounters of children from the independent school were such that a youth hostel in the temperate coastal environment of Swanage did not constitute an enjoyable experience for all students. Assumptions of the benefits, enjoyments and relevances of fieldwork amongst students may thus fail to take into account the variability of individual backgrounds, expectations and encounters.

For secondary students, the importance of the fieldwork experience may lie not so much with the development of social and domestic skills, more with the recognition that there can be a link between education and social life (Bowden, 1990; Foskett, 1997). The secondary fieldtrip may provide opportunities for students to establish personal relationships and social interactions, and to build confidence in learning (Smith, 1987; Allison, 1998; Nundy, 1999). Free (leisure) time within the fieldtrip is important to enable such interactions to develop (Foskett, 1999). The importance of the fieldwork experience to secondary students was highlighted by recognitions of the contribution that non-academic components had made to the heightening of individuals' fieldtrip enjoyments:

> The best bit was running down the hills at Old Harry. (Male student, 14; Hertfordshire secondary school)
>
> I enjoyed visiting Old Harry because we didn't have to do any writing and it was the most interesting and fun. (Female student, 15; Hertfordshire secondary school)
>
> It has been a laugh. (Female student, 15; Hertfordshire secondary school)
>
> Good exercise for mind and body. Good tanning session as well. (Male student, 15; Kent secondary school)
>
> Dune management at Studland was good because we got to roll about in the heather. (Male student, 17; Kent secondary school)

Students' enjoyments of the social and experiential aspects of a fieldtrip encounter may have positive implications for learning. Mackenzie & White (1982) highlight the importance of 'memorable episodes' in learning, also referred to as 'landmark learning'. The association of geographical knowledges with memories of aesthetic landscapes, social interactions or unusual events may enhance the development of understandings and improve the retention of information amongst students (Gagné & White, 1978). Nundy (1999:191) suggests that "fieldwork is most effective when it is deliberately structured to be engaging and memorable", as highlighted within

the responses above. Memorable and social aspects of the fieldtrip are prominent within students' recollections and enjoyments of their trip (see Nairn, 1999). However, despite the potential for fieldwork experiences to encourage learning of geography, students' enjoyment of a trip and their potential to learn may be strongly influenced by prevailing attitudes towards education. During the course of fieldtrip observation, patterns of student attitudes towards learning emerged, relating primarily to the age, gender and abilities of students.

4.4.1.1 Age-related responses to fieldwork

During the course of fieldtrip observation, it became apparent that fundamental differences existed between the attitudes of primary and secondary students towards fieldwork and geographical education. Differences were noticeable primarily in terms of apparent interest and enthusiasm, levels of complaint and co-operation with teachers / researcher. Enthusiasm, interest and co-operation appeared to wane considerably between primary and GCSE age groups, with levels of complaint rising. The trends were reversed to some extent amongst A-level groups. A countryside ranger who led guided walks with both primary and GCSE students highlighted the differences between the age groups. He stated that encounters with GCSE groups were frequently a struggle because the students could be disruptive and often appeared uninterested. In contrast, primary pupils were typically well behaved and enthusiastic.

The weather, the amount of walking, the work and boredom were all topics of complaint amongst the GCSE group from Hertfordshire. The teacher maintained that the reason behind his students' complaints was that they were 'typical North London kids', not used to being outdoors in the mud, rain and cold of the April countryside. The significant contrast between the students' urban cultural backgrounds and the rural environment of the fieldtrip appeared to influence their enjoyments of the experience (see Wendling, 1989). Many of the students lacked adequate clothing and equipment for the conditions, and levels of complaint were high. The fieldtrip may have failed to

connect with the popular interests and encounters of these students, hence it did not automatically constitute an enjoyable and relevant experience.

Dissatisfaction was less evident amongst primary groups. Younger children were sometimes difficult to organise and manage as a group, but they were generally less disruptive and complained less despite experiencing similar weather and often walking comparable distances. At Studland, year six pupils from Buckinghamshire attended a guided walk of the sand dune ecosystem. The walk was inappropriate for the group audience, with the level of information more suited to GCSE than year six students. The teacher suggested that only six of the 46 pupils were likely to have understood many of the concepts and themes introduced by the ranger. Nonetheless, the children sat still and listened with apparent interest and little fidgeting.

A characteristic of many secondary school students was their reluctance to participate in fieldwork exercises and discussion. Students often appeared disinterested and inattentive to the dialogues of their teachers or rangers and seldom questioned the nature of sites and landforms encountered. A-level students from Kent were advised to take notes on vegetation succession within the Studland sand dune ecosystem, but not a single student heeded the advice. However, students' responses to fieldtrips within questionnaire data suggested that few individuals possessed an actual dislike of the topics studied or activities undertaken. Three-quarters of the seventy A-level and GCSE students questioned stated that they had wholly enjoyed their fieldtrips, despite a proportion far smaller than this displaying enthusiasm within the field. The findings suggest that there was perhaps a reluctance amongst students to admit enthusiasm towards education and it was this which resulted in such behaviours, rather than an actual dislike of geography.

In contrast, the majority of primary school children appeared enthusiastic towards their fieldwork encounters. During the three primary trips observed, there were few complaints about the work or attempts to evade the exercises set. Admittedly, primary trips were generally less intensive than

their secondary counterparts, but activities such as drawing sketch maps and attending guided walks were undertaken with obvious enjoyment. Primary pupils appeared keen to ask and answer questions, offering suggestions and guessing at responses without apparent embarrassment. They also co-operated with the research to a greater extent than secondary students.

Changes in attitude between childhood and adolescence are well documented (see for example Brown, 1974; Barratt, 1977; Emler, 1993). They may often be attributed to hormonal fluctuations, causing individuals to display 'typical' adolescent behaviours, becoming impolite, stubborn and rebellious. Norquay (1999) suggests that adolescent rebellion may also be linked to issues of identity. Adolescence is a period during which individuals may encounter difficulties expressing their personal identities. They may thus find it easier to conform to the behaviours and attitudes prevalent within their peer group. Winiarski-Jones (1988) notes that the influence of the peer group is most pronounced between the ages of fourteen and sixteen, affecting individual attitudes towards education as well as actual academic performances:

> The group will determine how ambitious its members will appear, how hard working they are, how they speak, dress, what music they listen to, what prejudices they uphold. In a very real sense these are not their own but rather the property of the in-group to which they belong. (Winiarski-Jones, 1988:57)

Husén (1987; see also Francis, 1999; Doddington *et al.*, 1999) suggests that in affluent countries such as the UK, adolescents may develop negative attitudes towards education because it competes with leisure activities of a social, recreational, media and sporting nature. In less developed countries, the absence of alternative distractions may enhance the status of education amongst teenagers. Indeed in the UK, the predominant attitude amongst adolescent peer groups appears to be to perceive education as 'uncool'. Clever or hardworking students may be unpopular, as they are not seen to resist education in the same way as their peers (Whitelaw *et al.*, 2000). Academic success must be achieved without

apparent effort (Martino, 1999). A further characteristic of adolescent behaviours may be a resistance or opposition towards authority figures – including teachers (Bromnick & Swallow, 1999).

Age-related responses to fieldwork clearly support the suggestion that when attempting to enthuse students in geography – and indeed in any subject – it is the primary school age group which should be targeted (Catling, 1999*b*). The head of geography at a Dorset secondary school suggested that younger students may be very receptive to new ideas and are frequently interested in related issues such as conservation:

> If you start with the younger kids, they're much more (..) responsive (.) towards 'ownership', if you like. Older kids, they don't seem to think it's particularly cool or whatever to think about it in those terms, and their interests are more wide-ranging then. But I think it's particularly true when working with the primary sector (...) sort of the Key Stage 2, Key Stage 3 kids. They do become very aware (.) of issues relating to their environment. Not necessarily the facts about it, but the issues that relate to it.

Once students reach secondary school, their interests may become more wide-ranging, and with the saturated syllabuses and lack of available time within secondary education teachers may have less scope to make subjects enjoyable and appealing:

> When they go on to the (.) the next stage, (.) the sort of secondary age, there are so many things that (.) the teacher has to do, there's not time for dinosaurs and geology. (Retired geography teacher, Wareham)

Initiating a geographical interest amongst students at an early stage of education may encourage individuals to opt for the subject at secondary level, enhancing the uptake of geography at GCSE, A-level and higher education. Fieldwork is particularly important in this respect as it is recognised to be one of the more enjoyable aspects of formal geographical education (Ballantyne, 1999; Stainfield *et al.*, 2000).

4.4.1.2 Fieldwork as embodied experience

Diversity both between and within the educational groups encountered affords the recognition that 'students' are not homogeneous in terms of their socio-cultural backgrounds and popular experiences. In addition, individuals possess genders and variable abilities which may influence their responses to fieldwork. Maguire (1998; see also Bell & McEwen, 1996) suggests that physical geography fieldwork is frequently perceived as a masculine endeavour, a concept derived from nineteenth century male dominated discourses which related fieldwork to heroic military exploration (McEwan, 1998) and resulted in a feminisation of the landscape (Rose, 1993). Some geographers remain preoccupied with the notion that fieldwork constitutes a masculinity-validating experience (see for example Stoddart, 1986), enabling men to display feats of physical strength and demonstrate heterosexual male bonding and behaviours (see Maskell, 1999). Perceptions of the masculinity of physical geography – and fieldwork in particular – may be responsible for the existence of a gender imbalance within the discipline, with female geographers under-represented at all levels (McKendrick, 1996; Dumayne-Peaty & Wellens, 1998; Luzzadder-Beach & Macfarlane, 2000).

Within the fieldtrips observed, gender-related behaviours were apparent primarily within groups of secondary and higher education students. Little evidence was encountered to suggest that primary classes were subject to the same influences. Related to research into adolescent behaviours, Francis (1999) and Younger *et al.* (1999) have found that secondary school classes are frequently dominated and influenced by male students, who may have a tendency to be disruptive and boisterous (see also Willis, 1977). Francis suggests that gender disparities may result from the natural differences in maturity between male and female adolescents (see also Davies, 1985), with males displaying more immature behaviours between the ages of fourteen and sixteen. Male students' sometimes disruptive and aggressive behaviours may cause them to receive negative attention from teachers in the form of blame and criticism (Younger *et al.*, 1999). This was evident within several of the fieldtrips observed. A group of male students from Devon were constantly reproached for being disruptive and noisy; three

boys from Kent were severely reprimanded for swimming in the sea during field exercises without the permission of staff. Francis (see also Beynon & Atkinson, 1984) further highlights the influence of the peer group, with male students frequently under pressure to assert their masculinity and dominance:

> 'Having a laugh', demonstrations of heterosexual activity, 'playing up' the teacher, and other potentially disruptive strategies, play an important part in boys' social status among male friendship groups, as well as (interconnectedly) with their construction of masculinity" (Francis, 1999:361)

The competitive male hierarchies that emerged within several of the secondary groups clearly identified the cliques, the leaders, the class jokers and the hardworking students. Martino (1999) describes similar peer group characteristics within a class of secondary boys in an Australian school. He suggests that there may be a 'pecking order' of masculinities within a group, ranging from the 'cool boys' and 'party animals' – the most popular, prominent and sporty boys in the class – to the 'squids' and 'poofters' – so-called because they work hard or are perceived to have 'homosexual characteristics'. Martino suggests that individuals at the top of the hierarchy may place pressure on their peers to display heterosexual, masculine behaviours (see also Nairn, 1996). Even on the higher education geomorphology fieldtrip male students frequently competed to demonstrate their physical prowess, and fieldwork methods that required the digging of pits and carrying of heavy shear-box samples often evolved into contests of strength and endurance.

Groups of girls appeared to construct similar hierarchies to boys, although these were often expressed in a different manner. Any girl not considered 'cool' – especially within the GCSE groups – was immediately recognisable because of the existence of strict conformities in terms of make-up, dress and hairstyle (see Llewellyn, 1980; Francis, 1999). Rivalry between girls was expressed not through competition, but through ganging-up, spreading rumours and occasional quarrelling (Llewellyn, 1980). Girls could be scornful and malicious towards one another, behaviours noticeable within

all age groups. Within the year six class from Buckinghamshire, a girl was victimised through name-calling and accusations that she was 'immature'. In the Hertfordshire GCSE class, a female student was overheard saying that she wanted to 'punch' another girl for spreading rumours about her. Even at higher education level, quarrelling and irritability between two girls resulted in an individual becoming upset. However, disruption to the class instigated by female students was generally limited to complaint. Protestation to teachers about the weather or fatigue frequently emanated from the direction of a female student:

> Looking at how the shops have changed was the least interesting part of the trip because it was wet and horrible and once you have noticed one change you have noticed them all. (Female student, 15; Hertfordshire secondary school)

> I got a little tired from all the walking. (Female student, 14; Hertfordshire secondary school)

> The days were too long and tiring. (Female student, 15; Hertfordshire secondary school)

The female students' willingness to complain may result from the fact that they are under less pressure to conform to demonstrations of physical strength and fitness than their male peers (Maguire, 1998). Alternatively, female students may genuinely encounter greater difficulties with the physical nature of fieldwork. However, gender-related behaviours appeared to relate more to hierarchical disparities within gender rather than to any evidence of physical differences or competitiveness between genders. Female students completed the same physical tasks as their male counterparts, although they were often more likely to complain about doing so. This was the case even within higher education fieldtrips where strenuous tasks such as pit digging were frequently set. The masculinisation of fieldwork may thus relate to a perceived concept of the subject rather than to any notion of a female inability to participate (Maguire, 1998). The myth of the masculinisation of fieldwork requires deconstruction in order to address gender imbalances within physical geography (McKendrick, 1996; Dumayne-Peaty & Wellens,

1998; Luzzadder-Beach & Macfarlane, 2000). However, students of either gender may encounter difficulties with the physical nature of fieldwork. For whatever reason, an inability to participate may result in the marginalization of students' learning experiences.

The physical nature of fieldwork may be particularly problematic for students with special needs. Many fieldwork sites have few disabled facilities and it may be difficult to adapt techniques for use by individuals with special needs. Only two wheelchair-users were encountered throughout the observation of educational groups. Both female, the students were members of the GCSE group from Hertfordshire. Much of the group's fieldwork was undertaken on the beach or involved walking long distances over rough ground. As a result, the students frequently had to visit alternative sites separate from the rest of the group. The students were marginalized not only from their peers but also from the learning experiences encountered by the group. One of the students mentioned that she felt bored at times during the fieldtrip because there was not enough for her to do. Nairn (1999:278) states that "if geographical ability depends / requires physical ability, then disabled students are excluded from particular forms of geographical knowing". The difficulties encountered by students with special needs on fieldtrips suggest that physical geography fieldwork can often be an elitist encounter suitable only for the able-bodied (Rose, 1993; Maguire, 1998; Nairn, 1999). However, the variability of possible learning encounters, for example the interactive discussion approach adopted by the West Midlands A-level group, highlights that physical geography fieldwork need not marginalize students with special needs.

Embodied fieldwork responses highlight the variability of 'the fieldwork experience' amongst students. Not only do fieldwork encounters vary according to pedagogical factors, including approaches to learning and geographical representation, but they may also vary as a result of social and personal interactions. Finders (1998; see also Davies, 1985) highlights the danger of aggregating students into a homogeneous group in which individual characteristics are subsumed under a banner of, for example,

'adolescence'. Individual characteristics may contribute to the construction of personal fieldwork experiences and may be responsible for the creation of further variability in students' encounters with geography.

4.5 The variability of fieldwork encounters: a case study

To add strength to the study of variability within students' geographical fieldwork encounters, a case study was implemented which focused upon the experiences of a specific educational group, a year five class from Wiltshire. Catling (1999*b*) suggests that it is at primary age that students are most readily enthused about geography, with implications for improving student uptakes of geography at all levels within the discipline. However, it is unclear as to which aspects of geography are most valued by students of this age. Determining primary school students' enjoyments of geography may enable learning and experiential conditions to be optimised within fieldwork encounters. The specific aim of the case study was thus to assess the variability and value of students' fieldwork experiences.

4.5.1 The fieldwork setting

Encounters with educational groups of all ages were instrumental in the design and organisation of a fieldtrip and accompanying resources for year five (Key Stage 2) students visiting Dorset. Whereas many secondary school teachers preferred to undertake teaching and resource preparation themselves, primary school teachers were frequently keen to make use of pre-prepared resources, especially teachers without specialist knowledges of geography (Hawley, 1996). Primary fieldtrips often contained relatively few geography-based exercises and teachers may have been unaware of the number of different exercises that can be successfully completed with children of primary age. The adoption of fieldwork techniques contributes to an active approach to learning, which has been shown to have positive

implications for the development of knowledges and motivation (Carpenter, 1983; Kern & Carpenter, 1986).

The year five fieldtrip was conducted at Hengistbury Head, a headland of Tertiary age located between Bournemouth and Christchurch on the eastern margin of the Dorset coast (Bournemouth Borough Council, 1998; Hawes, 1998). Although Hengistbury Head attracts between 30,000 and 40,000 student visitors each year (Bournemouth Borough Council, 1998), it does not face the problems of honey-pot sites elsewhere on the Dorset coast. The site is large and well managed, with the potential to absorb significant numbers of visitors. It has effective transport structures in place including bus and ferry services and large car / coach parks. Many honey-pot sites have poor public transport links and are accessible only by roads unsuitable for coaches. Hengistbury Head also has facilities for students with special needs, including disabled toilets and wheelchair access to the sea front and nature reserve.

Study of the coast at Hengistbury Head provides the opportunity to cover many aspects of the geography curriculum for Key Stage 2 (DfEE, 2000). Alongside the inclusion of fieldwork within geographical learning at this stage (see *Table 4.i*), beaches are introduced within the theme of *Water and its Effects on the Landscape*. The study of patterns of physical features in the environment enables the introduction of landforms and processes at the coast. Environmental issues form another key theme within the curriculum, validating studies of coastal management and conservation. Field investigation at Hengistbury Head also relates to themes within the *Materials and their Properties* section of the science curriculum for Key Stage 2 (DfEE, 2000). The curriculum states that pupils should be taught to describe and group rocks on the basis of their visible physical characteristics. Furthermore, the process of sieving to separate particles of different sizes is listed as a technique to be introduced.

At year five, pupils' encounters with coastal geography may be limited. Pupils were not expected to possess knowledges of the processes and

landforms introduced within the fieldtrip. However, to provide students with the opportunity to develop new geographical knowledges in the field, a worksheet approach was adopted. Three worksheets were designed and produced by the researcher, requiring students to apply a range of skills including sketching, identification and measurement, and questioning their knowledges of basic geographical concepts. Within the worksheets, themes and techniques were integrated to prevent compartmentalisation. Worksheet A was mainly descriptive, requiring the illustration, description and grouping of rocks found on the beach and the identification of shells. Worksheet B incorporated the study of cliffs, including the estimation of their height and the labelling of 'old', 'young', 'hard' and 'soft' rocks. Worksheet C focused upon the application of geographical measurement techniques. The pupils used callipers to measure stones, and sieved sand to determine the size of its particles. The worksheet also introduced basic concepts of coastal management, including the purpose of groynes and gabions. Copies of Worksheets A, B and C are included within *Appendix 4.2*. To supplement encounters of an academic nature, students undertook a variety of leisure activities, building sandcastles, paddling in the sea and travelling on a miniature train. The valuing of fieldwork encounters by pupils was assessed through observation, worksheet responses and drawings completed by the pupils after the fieldtrip.

4.5.2 Assessing the value of fieldwork encounters

Alerby (2000) has studied children's drawings to determine their thoughts and feelings about the environment. She suggests that drawings may depict a combination of thoughts (knowledges) and experiences. Following their return to school, the year five pupils were asked to complete drawings depicting their memories and enjoyments of the fieldtrip. The significance of their memories related not to the amount of geographical knowledge they had retained, more to the particular events and encounters that had influenced and interested them most. Drawings may be considered to depict key memorable episodes (Mackenzie & White, 1982; Nundy, 1999),

indicative of learning within the affective domain and representing the potential for learning by connection (Gagné & White, 1978; Nundy, 1999).

Pupils' drawings could be divided into three distinct categories relating to the fieldwork completed, the journey on the miniature train and paddling in the sea. The latter two categories represent aspects of 'the fieldwork experience'. The class made a total of 28 drawings. Of these, twelve represented the fieldwork component, thirteen were of the train and three depicted pupils paddling in the sea. The fieldwork drawings could be further subdivided according to the detail they portrayed. Two depicted basic landscapes (e.g. *Figure 4.vi*), four represented some degree of layering or rock differentiation within the cliffs (e.g. *Figure 4.vii*) and six included some form of coastal defence structure (groynes or gabions) (e.g. *Figure 4.viii*). Although the detail and content of the drawings was variable, the fact that over half of the class chose to represent fieldwork aspects of the trip within their pictures – in the face of strong competition from non-academic encounters – suggests that geographical learning experiences remained uppermost in the memories of many children.

It was new geographical knowledges encountered during the trip, in the form of information about the coastal defence structures, that were depicted most frequently. Pupils attached importance and meaning to their geographical fieldwork, despite encountering new information and experiences. Indeed, pupils appeared to attach particular value to the learning of geographical concepts considered more advanced than those encountered within the classroom, as indicated within their annotations of drawings:

> I learnt that the youngest part of the rock is the top half and the oldest part is the bottom. (Female student, 10)

> I learnt why there are different layers in the rock. (Male student, 10)

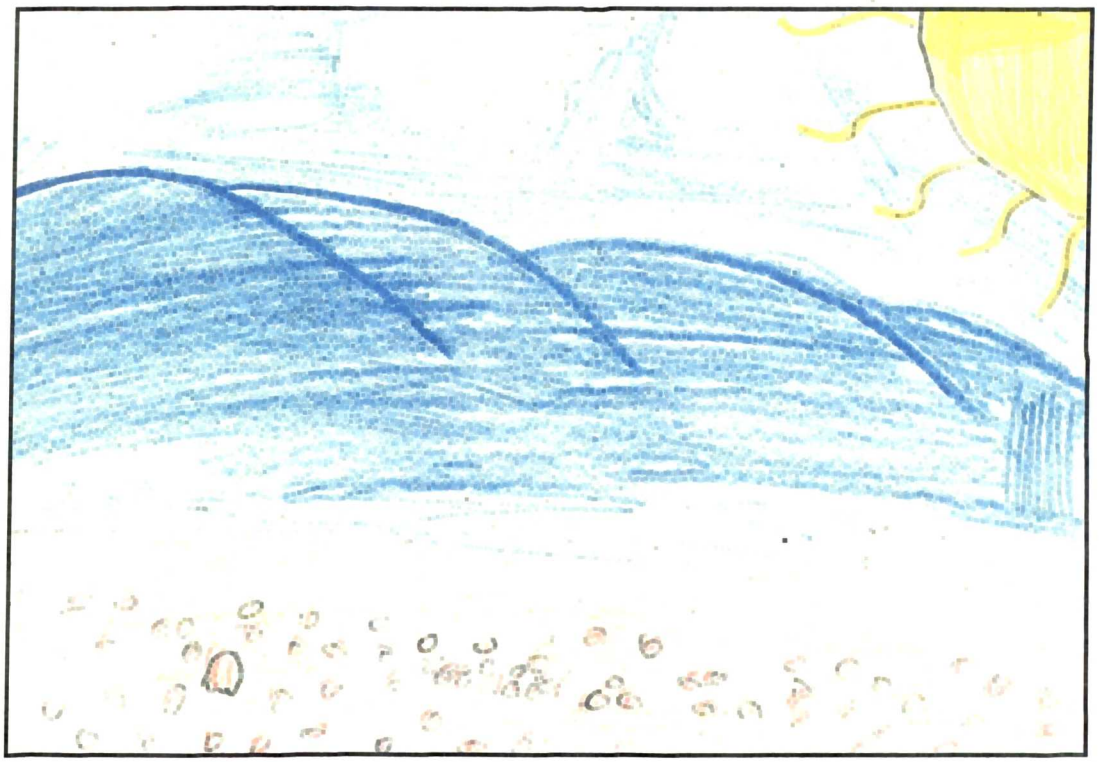


***Figure 4.vi*: Year 5 pupils' representations of fieldwork encounters: a basic landscape drawing.**

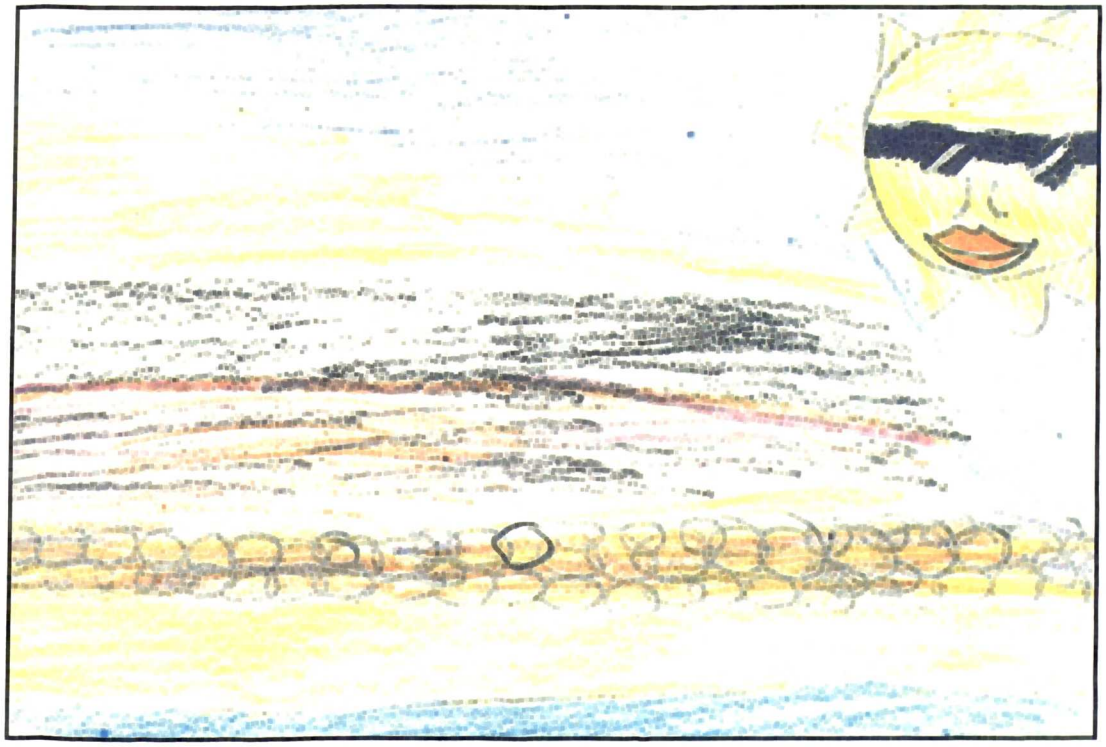


***Figure 4.vii*: Year 5 pupils' representations of fieldwork encounters: a drawing depicting the layering of the cliffs.**

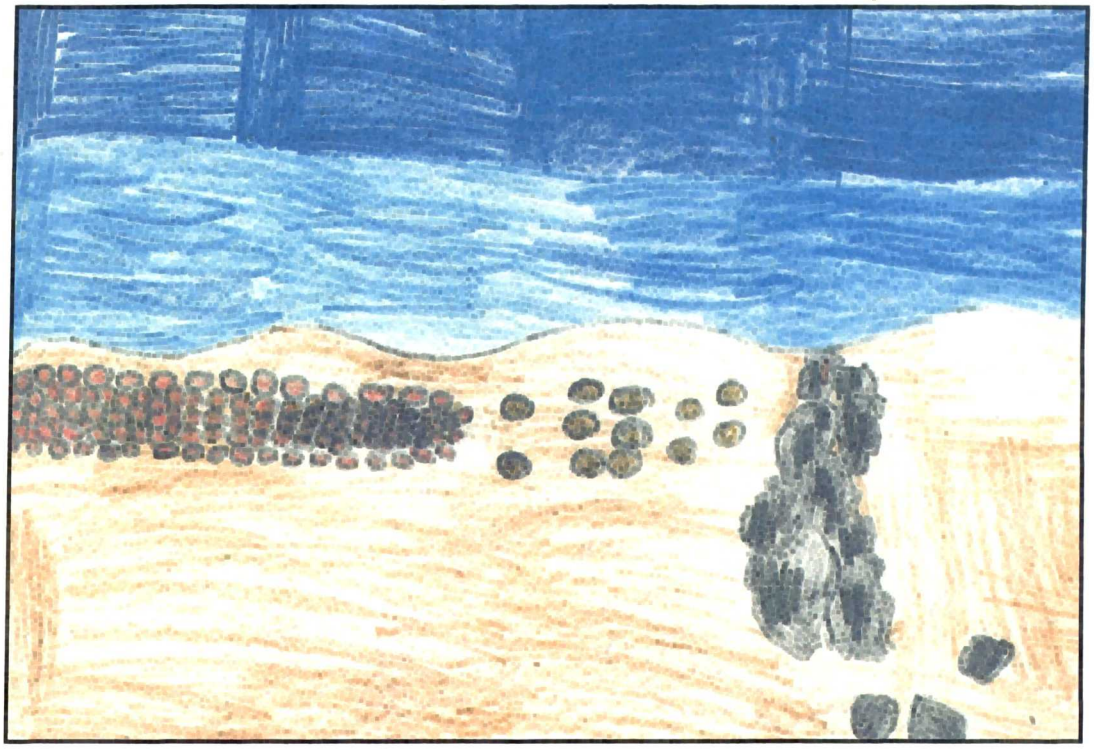


***Figure 4.viii*: Year 5 pupils' representations of fieldwork encounters: a drawing depicting coastal defences.**

***Figure 4.ix:* Year 5 pupils' representations of fieldwork encounters: a drawing demonstrating the acquiring of new geographical knowledges.**

Figure 4.ix represents the extent to which previously unknown geographical knowledge and vocabulary may be retained by children of this age. The drawing depicts a groyne and gabion wall, annotated with the caption: "this is a gryone it stops the beech from being sweeped away" (male student, 10) [spelling and punctuation retained]. Pupils may thus benefit from the creation of exciting and progressive learning experiences. Value was similarly attributed to the use of technical fieldwork equipment, especially when it was revealed that the equipment had been borrowed from the University of Durham (see *Figure 4.x*):

> I never knew that you could use those special sieves to see whether the sand is fine or course. (Female student, 10)
>
> I learnt how to use the callipers you open them up put the stone in squeeze them together take it out and read the measurement. (Male student, 10)
>
> Thank you for letting us use proper equipment. (Female student, 10)

Kwan (1999) suggests that introducing students to new techniques and methods at a young age may allow familiarisation. Primary children may be eager to attempt new techniques and methods, an enthusiasm which may fade as they become older (Catling, 1999*b*). Similar benefits may be achieved from the introduction of new geographical knowledges.

Geographical fieldwork had to compete with leisure activities – the miniature train and paddling in the sea – for depiction within pupils' drawings. Nundy (1999:194) suggests that non-academic events or episodes may act as 'reference points' to stimulate recollection of associated knowledge:

> Students at the centre were able to recall, readily, novel events that happened during the week, such as the times they got wet or muddy. For these students, the unusual nature of the event created an imprint upon their memory - a strong initial reference point which permitted the recall of additional images and information.

***Figure 4.x*: The researcher demonstrating the use of sieves in the measurement of sand particles to Year 5 pupils on the beach at Hengistbury Head.**

Nundy adds that "the strength of these memories appeared to rely upon the degree to which the event lay outside the student's normal frame of reference. The more unique the episode, the more likely it was to act as a trigger for the recall of other information" (1999:194-5). The extent to which riding a miniature train and paddling in the sea differ from a normal day at school would suggest that the events may act as cognitive triggers for the recall of (geographical) information. In addition, non-academic experiences may enhance pupils' enjoyments of a fieldtrip. Levels of enthusiasm amongst the pupils were high, they appeared to enjoy all aspects of the fieldtrip and this was reflected within their drawings with enjoyment depicted on the faces of people (see *Figures 4.xi* and *4.xii*). Enthusiasm and enjoyment amongst the pupils supports observations of the importance of non-academic, experiential elements of fieldwork encounter:

> Thank you for the lovely day. I like the paddling but I got soaked and I brought half the beach back with me. I also liked the train I was trying to drink on the train but I couldn't because of all the bumps. (Male student, 10)

> I enjoyed coming to the beach I loved the little train. And I loved the beach the sand was butiful if any body went there I would think they would say it was butiful. I relly enjoyed it. (Female student, 10)

> My favourite part was when we went into the sea. I enjoyed going through the tour on the train as well. The part where we worked was fun too. (Male student, 10)

Mackenzie & White (1982) suggest that the linkage of 'memorable episodes' with learning experiences may have positive implications for formal education. Similarly, the memory of enjoyable episodes within fieldwork may cause pupils to attach greater value to geography as a subject for study within formal education. The case study highlights that in order to enthuse primary school students in geography, teachers must acknowledge the variability of value attributions amongst pupils and should strive to incorporate elements of exciting and progressive learning within fieldwork, alongside enjoyable and memorable non-academic encounters. The case study thus supports the

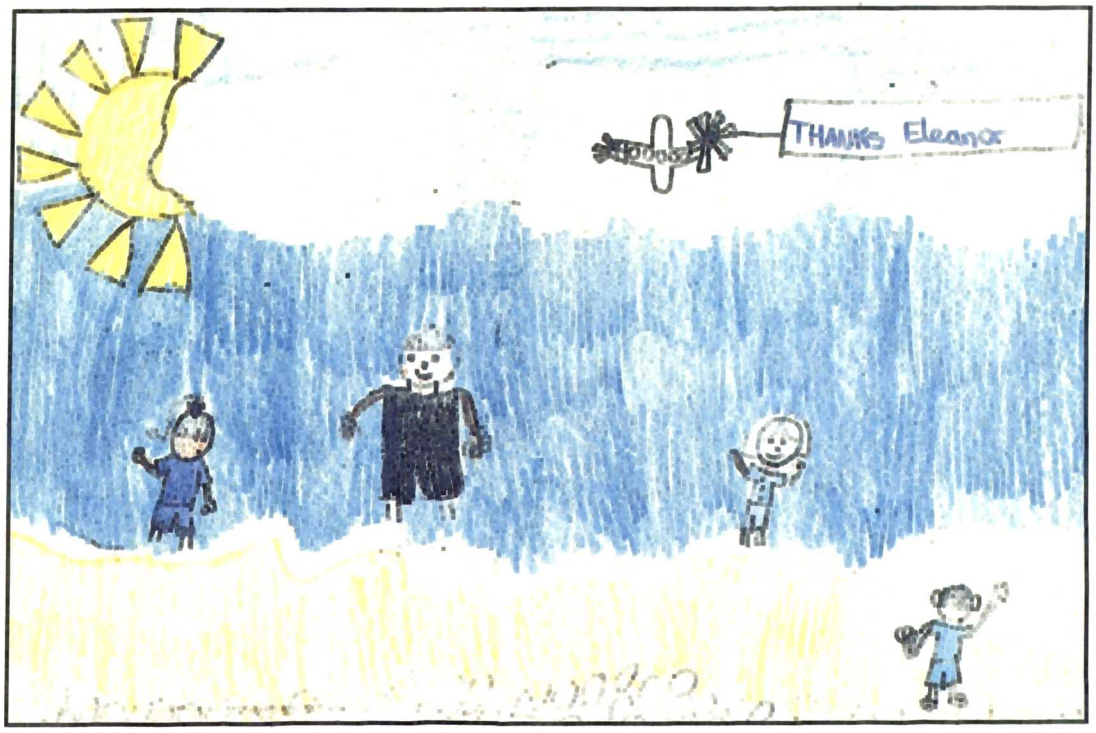


***Figure 4.xi*: Year 5 pupils' representations of fieldwork encounters: a drawing depicting a non-academic activity: paddling.**

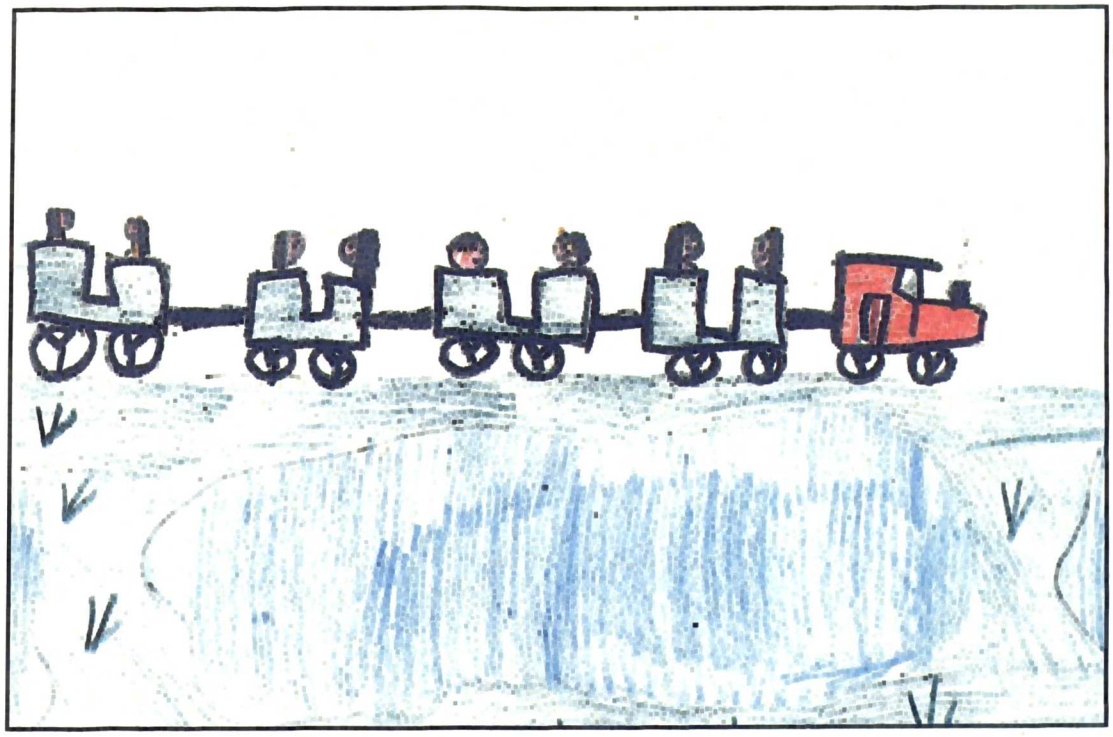


***Figure 4.xii*: Year 5 pupils' representations of fieldwork encounters: a drawing depicting a non-academic activity: the miniature train.**

findings obtained through observation of variable fieldtrip approaches. However, the case study of a narrow field of educational visitation in terms of age group and site visitation means that the findings relating to student understandings, experiences and enjoyments of geographical learning cannot justifiably be extrapolated to encompass educational fieldtrips as a whole.

4.6 Conclusion

The aim of this chapter was to assess the variability of individual fieldwork encounters and experiences within the setting of the Dorset coast. Fieldwork is a major framework through which audiences may learn about geography. It is widely assumed to make a significant contribution to formal geographical education (see Kern & Carpenter, 1986; Pinet, 1989; Foskett, 1999), reflected through its prominence within the National Curriculum (DfEE, 2000) and secondary examination syllabuses (Edexcel, 2000; OCR, 2000). However, evidence of the value of fieldwork to learning is primarily circumstantial (Mackenzie & White, 1982; Fuller *et al.*, 2000). McEwen (1996) suggests that in the face of declining opportunities for fieldwork in schools and higher education (Smith, 1999), research must be conducted to substantiate the benefits of fieldwork to geography. This chapter highlighted that assessing the positive implications of fieldwork is in fact difficult due to the diversity of approaches to teaching, learning and encounter within fieldwork.

The Dorset coast is a popular area for fieldwork. It has been suggested that such popularity stems from the existence of 'classic' geographical landforms along the coast, including Lulworth Cove, Chesil Beach and Old Harry Rocks (Edmonds, 1998*c*). These examples are widely cited within textbooks and curricula and form the setting for much formal geographical learning amongst educational groups. The variability in terms of sites and landscapes encountered by students is thus limited. However, variability arises from different sources. Provisions for educational fieldtrips within Dorset are diverse, primarily in terms of the accommodation, facilities

and interpretation available. Teachers may determine the structure of their fieldtrips through selecting the alternatives which may deliver pedagogical and experiential benefits to students.

Variability in geographical fieldwork encounters also arises from the mechanisms adopted by teachers to overcome issues of representation in the field. The extent to which fieldwork is representative of the *physical* geography taught within the classroom may be questioned. The compartmentalised and frequently simplified nature of formal geography education may be considered fundamentally disparate from the complex geographies of the field. In addition, the processes upon which much of geographical education is based frequently occur over timescales much greater than those spent in the field. Teachers may attempt to overcome problems of representation in two ways. First, they may reduce the complexity of field sites to fit textbook or curricula descriptions. Second, they may highlight the complexity of sites, emphasising that pedagogic models of geography are necessarily simplifications of reality. Approaches to teaching may similarly vary, relying upon the doctrines of either active or inactive learning. The pedagogic framework of fieldwork has the potential to create negative as well as positive geographical learning encounters for students.

Ballantyne (1999) highlights the importance of fieldwork in enthusing students in geography and in bridging the gap between formal education and popular encounter (see also Stainfield *et al.*, 2000). Alongside the creating of a motivational and inspiring setting for geographical learning, authors have highlighted the value of 'the fieldwork experience' (Wass, 1990; Clark, 1996; Nairn, 1996, 1999). Students may attain cognitive and affective advantages from the personal and social interactions that develop within fieldwork situations and from the 'memorable episodes' of non-academic fieldtrip components (Mackenzie & White, 1982). However, students' enjoyments of fieldwork cannot be assumed. They may be dependent upon the influences of social and cultural background as well as upon individual characteristics of age, gender and ability. A case study of year five students highlighted the variability of students' fieldwork encounters and determined that individuals

may attach value to different aspects of the fieldtrip, including both academic and non-academic components.

In terms of McEwen's call for the value of fieldwork to formal geographical education to be assessed, this chapter has highlighted some particular issues. Findings suggest that fieldwork may have positive implications in terms of student learning and enjoyment but that this is very dependent upon the structure and organisation of the trip, including approaches to teaching and the balance of academic and non-academic activities, alongside students' individual and personal values of fieldwork encounters. Enthusing students in geography may be valuable for the discipline as a whole, resulting in higher rates of subject uptake throughout education (Binns, 1994; Catling, 1999*b*). This is vital in the face of declining numbers of geography students at GCSE and A-level (Bradford, pers. comm.; see also Jenkins, 1987; Unwin, 1987; Rawling, 1999). However, the popularisation of geography may be dependent upon the organisation and structure of fieldtrips and the creation of a relevant and enjoyable experience for student groups. The onus is thus placed upon teachers and fieldwork providers to create stimulating and inspiring fieldwork experiences for students.

Chapter 5

Symbolic Representation and Informal Learning: Exploring the Value of Geography amongst Popular Audiences

Chapter 5: Symbolic representation and informal learning: exploring the value of geography amongst popular audiences

5.1 Introduction

The previous chapter of this thesis focused upon representations and encounters of formal geographical knowledges at the Dorset coast. The extensive and varied coastal landscape also provides opportunity for informal learning through encounters with diverse popular geography based activities and experiences. Stebbins (1992, 1996) recognises the importance of leisure time in the development of specialist hobbies and activities, including geography related interests. Tourism constitutes "one of the most important elements shaping popular consciousness of places, cultures, and nature" (Norton, 1996:356) and is "a means of providing 'hands-on' geographic experiences that we would otherwise be only vicariously aware of" (Britton, 1991:466). However, there has been a lack of research into tourist interpretations of place and experience (Norton, 1996; see also Squire, 1994). This chapter focuses upon the variable interests and informal geographical learnings / knowledges of popular audiences (visiting publics) within Dorset.

Due to the inherent difficulties of recruiting visiting publics for purposes of qualitative analysis, the research findings presented within this chapter were obtained primarily through the implementation of a qualitative questionnaire survey. The categorical responses emanating from elements of questioning enabled results to be subjected to a degree of quantitative interpretation. However, the role of quantitative data analyses within this chapter are primarily triangulative, and as such are used to support and strengthen the predominantly qualitative framework for interpretation.

Surveys of visiting publics were conducted during August and September, to obtain a cross-section of audiences visiting the Dorset coast during both the peak season and shoulder months of the summer. Thirty-three per cent of respondents were found to be visiting the area in couples, with a further 56% in family groups of between 3 and 6 individuals (n=234). Fifty percent of visiting groups included at least one child, 24% of whom were of primary school age or below. Predictably, the majority of family groups visited the area during August but there was a predominance of couples in September. Families with children are often constrained to taking holidays within the school summer holiday period, but the findings suggest that there may still be a market for childless couples outside the summer months.

5.2 Setting the scene: the tourism industry in Dorset

The English Tourist Board (1998) has reported that in 1994 domestic tourism increased for the first time since the 1970s, when the foreign package holiday began to attract British tourists away from traditional seaside resorts (Williams & Shaw, 1997; Löfgren, 1999). The 1970s signalled the start of a pattern of decline in domestic tourism. However, despite the recent recovery foreign locations still account for 64% of British vacations (English Tourist Board, 1998). The domestic market caters predominantly for shorter, additional holidays.

Expanding markets for short breaks and second holidays within the UK may constitute a response to trends within contemporary tourism which see individuals demanding different, unusual and unique holiday experiences (Fiefer, 1985) and seeking opportunities for encounters with nature and the rural (Urry, 1990). Williams & Shaw (1997:6) suggest that "a very different tourist product is being sought rooted in the myths of nature and heritage rather than in the bundle of activities offered by the traditional seaside resorts". Demand for unusual and natural holiday experiences has created competition between tourist boards and travel companies to market products on account of their individuality or significance and an industry catering for

specialist tourism encounters has thus developed (Ceballos-Lascuráin, 1996). Specialist interests promoted may range from fine art study tours (Inscape) to National Trust working holidays alongside a wide variety of activity packages.

Specialist tourism providers may frequently attempt to attract visitors to regions by marketing under specific banners or themes (Hopkins, 1998), the "conscious use of publicity and marketing to communicate selective images of specific geographical localities or areas to a target audience" (Ward & Gold, 1994:2). Early promotional banners were often linked to classical literary figures who had resided in or written about an area (Squire, 1988; Carson, 2000). Since the late 1980s, South Warwickshire Tourism (2000) has promoted its region under the banner of 'Shakespeare Country'. Similarly, West Yorkshire employs the designation 'Brontë Country' (Eagle Intermedia, 2000) and Hampshire welcomes you across its border with a sign informing you of your entry into 'Jane Austen Country'. Crang (2000) speaks of the country being 'carved up' by such literary associations. Recent drives towards specialist attraction have encouraged the diversification of themed tourism marketing. Banners may now be linked to modern authors, for example 'Herriot Country' in North Yorkshire, and prominent non-literary figures. Cycle trails around Worcester and the Malvern Hills are promoted as a series of 'Elgar Routes'. A long-distance walking trail in Northumbria is designated as 'St Cuthbert's Way'. Perhaps the newest popular marketing strategy relates areas to film and television representations (Tooke & Baker, 1996; Riley *et al.*, 1998). Goathland, in North Yorkshire, accommodates 1.2 million visitors each year (Gilbert, 1996, cited in Mordue, 1999) due to the popularity of the ITV police drama *Heartbeat* which is filmed in the village.

5.2.1 Trends in Dorset tourism

Trends in British tourism are reflected within the Dorset region. The traditional two-week seaside holiday appears to have shortened considerably (Agarwal, 1997; Urry, 1997; English Tourist Board, 1998; Löfgren, 1999). Of

the visitors encountered within this study, 44% were staying in Dorset for less than a week, 42% for one week and only 14% for over a week (n=234). Williams & Shaw (1997; see also Hopkins, 1998) argue that increased mobility has further enabled a surge in the number of day visits to coastal resorts. Over 13 million of the 17.5 million annual visitors to Dorset arrive on day trips (Dorset Coast Forum, 1998*c*).

Despite the declining fortunes of the traditional summer holiday, tourism remains the most economically significant sector of the Dorset economy. The tourism industry accounts for over 38,000 jobs in the region and generates an annual income of over £830 million (Dorset Coast Forum, 1998*c*). However, the characteristics of tourism in Dorset have changed. Stebbins (1992, 1996; see also Jenkins & Sherman, 1979; Sherman, 1985) suggests that reductions in the length of the working week and associated increases in leisure time have altered the framework of the holiday and it may no longer have rest and recuperation as its primary goal. Instead, leisure experiences may provide "a way of finding personal fulfilment, identity enhancement, self-expression, and the like" through specialist tourism pursuits (Stebbins, 1992:3). Stebbins suggests that contemporary holidays may often constitute 'serious leisure', involving "the systematic pursuit of an amateur, hobbyist, or volunteer activity that is sufficiently substantial and interesting for the participant to find a career there in the acquisition and expression of its special skills and knowledge" (1992:3).

In Dorset, specialist tourism is an expanding industry. The varied nature of the coastline provides opportunity for the pursuit of diverse activities and encounters. Diving and rock climbing are widely popular within the county, which also possesses eleven golf courses. A farm in Buckland Newton markets the experience of 'Thrilling Country Activities for All Ages' (West Dorset District Council, 2000). The 'thrilling activities' include quad biking and 'mini mavriks', with the alternative attraction of badger watching at night. Dorset's specialist tourism industry also promotes educational and special interest encounters. The Kingcombe Centre near Toller Porcorum offers residential courses in the fields of natural history, music, painting and

local interest. Sculpture courses are held in the disused Tout Quarry on the Isle of Portland.

Perhaps the oldest and most highly developed special interest encounter within Dorset relates to the county's literary associations. Thomas Hardy was born in Dorset in 1840 and went on to become one of the most extensively read poets and novelists of the nineteenth century. Many of Hardy's novels were set in Dorset locations (Williams, 1973), although the names of towns and villages were frequently altered. Dorset is often referred to as 'The Heart of Hardy's Wessex' within tourism and literary circles, and may be marketed as such for the purposes of specialist literary tourism. The Thomas Hardy Society produces materials promoting walks and trails around the sites of Hardy's novels; Chadwick (1985) interprets a 200-mile motoring route documenting key events in Hardy's life and including detail of the locations and landscapes featuring within his books. The contemporary novelist John Fowles is amongst several other authors who have based literary writings upon Dorset. His book, *The French Lieutenant's Woman*, contains vivid description of the Lyme Regis Cobb and coastline.

The dramatic coastal landscape of Dorset has been adopted as the setting for several films and television dramas. *The French Lieutenant's Woman* and *Emma* were filmed on location in Dorset, as well as scenes from the television costume dramas *Tom Jones* (BBC), *Tess* (ITV) and *Persuasion* (BBC) (West Dorset District Council, 1999). The recent filming of the BBC drama series *Harbour Lights* in West Bay has been particularly prominent within the county. *Harbour Lights* recounts events in the life and work of the Bridehaven (West Bay) harbourmaster, the role of whom is played by actor Nick Berry. The drama is now into its third series, having attracted around 8 million viewers per episode during the first series (West Dorset District Council, 1999). The 'Harbour Life' visitor centre has been opened in West Bay to support the interest and tourism generated by *Harbour Lights*. Tooke & Baker (1996) note that film and TV dramas may have a profound influence upon the attraction of tourism visitations to an area.

Despite the variety of specialist tourism experiences available within Dorset, an apparent gap in the market surrounds popular involvements in the physical geography and geology interest of the county's coastline. Landscape is inherent within Dorset's literary coverage and as a backdrop to the films and TV dramas, but it is not widely promoted as an interest within itself. Markwell & Weiler (1998:98; see also Williams & Shaw, 1997; Hughes, 1996) highlight "the importance of the natural environment as an attraction in its own right and as a setting in which tourism experiences take place". Tourism based upon Dorset's geographical resource may thus succeed in enhancing coastal visitation, adding another string to the bow of the declining seaside tourism industry. Dorset County Council's *Jurassic Coast Project* has the primary aim of popularising physical geography and geology along the coastline through education and interpretation (see Edmonds, 1998*a*,*b*,*c*; Jurassic Coast Project, 1999). Further, it aims to provide a special interest 'geo-tourism', attracting visitation based upon the landscape resource. In the light of Dorset County Council's geo-tourism initiatives, this chapter investigates provisions for informal (popular) geographical and geological encounters within Dorset and examines public perceptions and knowledges of the region's geographical environments and landscapes.

5.3 Popular geographies

Popular geography constitutes that "geography which is produced and used beyond the academy and other official knowledge institutions" (Crang, 1996:631; see also Cosgrove & Jackson, 1987). Geography is not exclusively an academic subject; it may be linked to popular experiences through travel and exploration (Stoddart, 1986; Smith, 1987; Walle, 1996), natural history and geology (Barber, 1980; Burgess & Jenkins, 1989). In contemporary geography, Lewis (1985) suggests that pedagogic links may be forged through appreciations of landscape and nature prevalent amongst popular audiences (see also Burgess *et al.*, 1988; Squire, 1988). Associations with place and landscape provide the opportunity for

connections to be established with studies and knowledges of geography and geology (Badman, 1994).

5.3.1 The popular geographies of Dorset

A fundamental component of popular geographical encounter may be assumed to relate to the aesthetic appreciation of landscape (Lewis, 1985; Burgess *et al.*, 1988; Squire, 1988). In Dorset, dramatic landforms dominate the coastline and popular demands for unique and aesthetic spectacles may easily be fulfilled (Fiefer, 1985; Agarwal, 1997). The coastline is traced by a popular stretch of the South West Coast Path, a trail used by over one million walkers annually. The scenic backdrop is a particular attraction of such activity; a 1994 survey established that 71% of Purbeck respondents had chosen to utilise the coast path on account of its spectacular scenery and landscape (South West Coast Path Project, 1995).

Alongside aesthetic appreciation, activities and interests encountered within the coastal environment may provide the opportunity for further popularisations of geography and geology. For example, activities relating to wildlife, industrial history and archaeology may incorporate elements of geographical interest. Furthermore, Dorset has strong dinosaur links. Large stretches of the Dorset coastline are formed from Jurassic and Cretaceous rocks and form the locations of significant fossil dinosaur and marine reptile finds, including ichthyosaur and plesiosaur in West Dorset and diplodocus footprints in Purbeck. Mary Anning, a nineteenth century Dorset fossil collector discovered the first British ichthyosaur fossil in Lyme Regis (see *Figure 5.i*). The fossil is currently displayed in the Natural History Museum, London (see *Figure 5.ii*). In early 2000, a local collector uncovered one of the largest ichthyosaur fossils ever recorded on the beach at Charmouth (see *Figure 5.iii*) (*The Independent*, 2000). Smaller fossils – including ammonites and belemnites – are also common in West Dorset. They may frequently be found on the beaches of Lyme Regis and Charmouth, creating opportunities for a popular partition of fossil hunting.

Figure 5.i: Lithograph (1825) of the Cobb at Lyme Regis in which the figure is thought to be Mary Anning (from Cadbury, 2000:8).

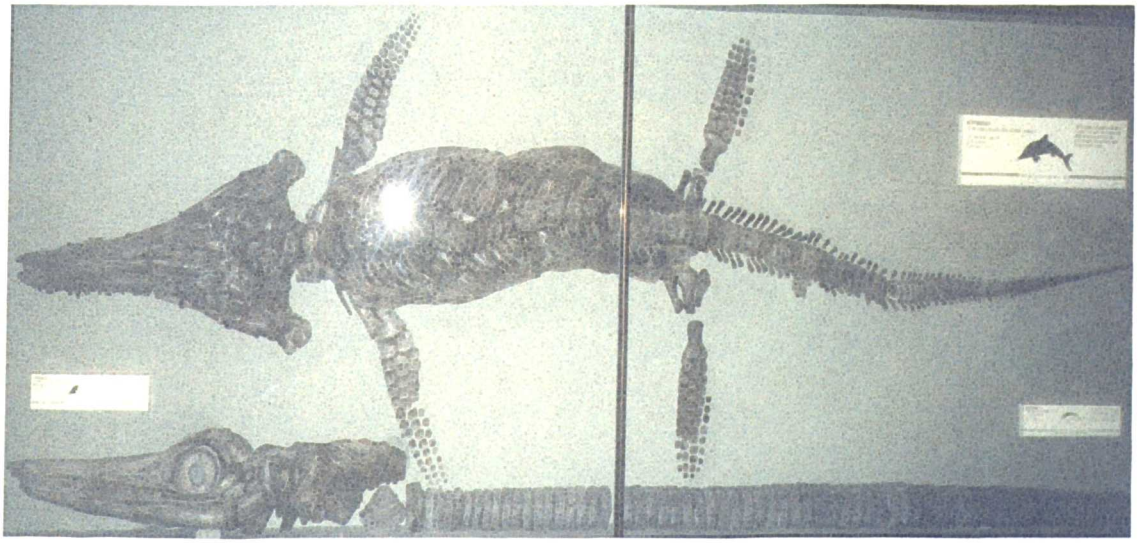


Figure 5.ii: Mary Anning's nineteenth century ichthyosaur fossil find, currently displayed in the Natural History Museum, London.

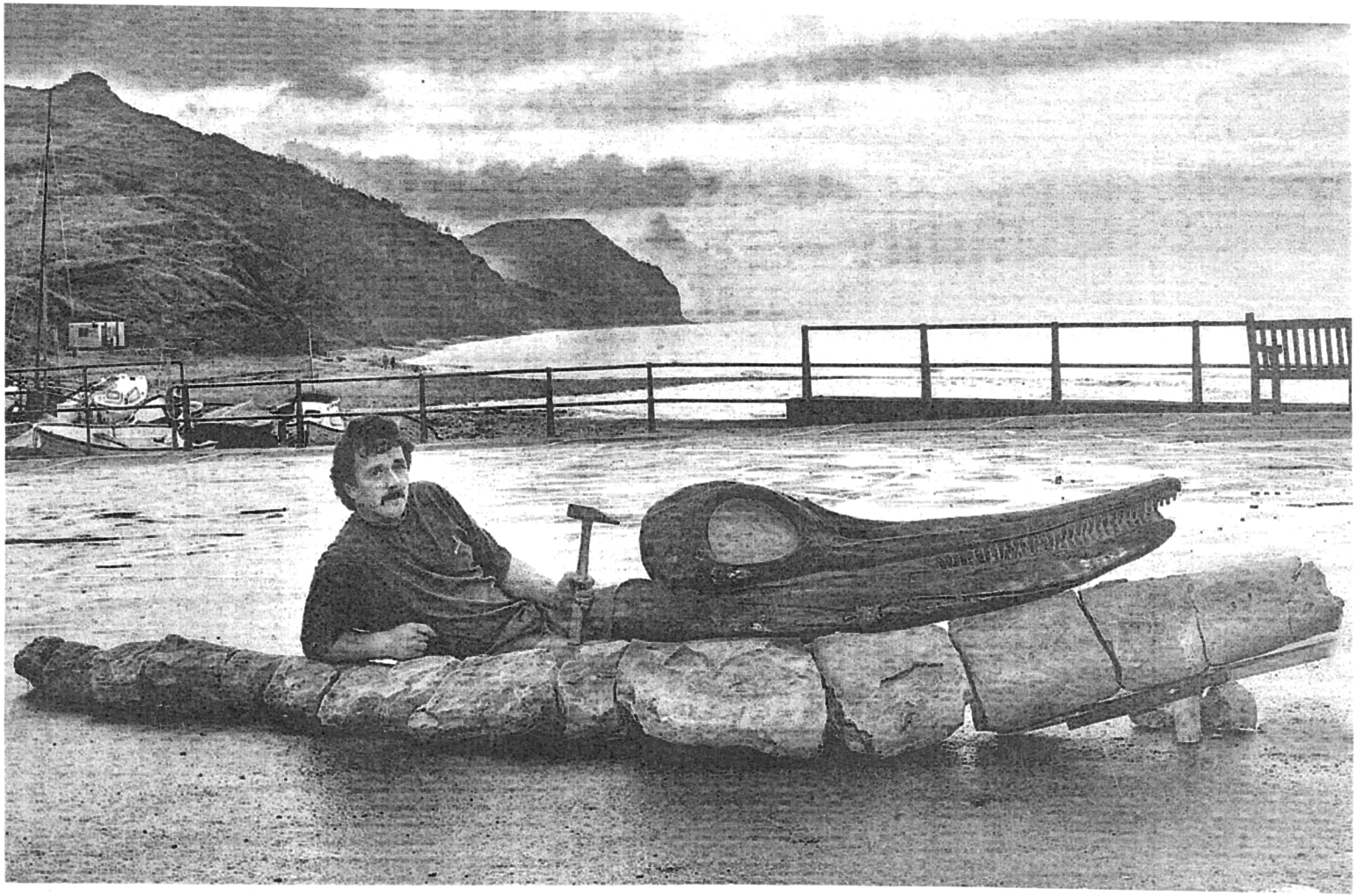


Figure 5.iii: Tony Gill, a fossil hunter, with the remains of a 180 million-year-old ichthyosaur he found on the beach at Charmouth in Dorset (from *The Independent*, 2000:9).

Children in particular may frequently be fascinated by fossils and dinosaurs:

> All small kids are completely taken by dinosaurs, aren't they? And that's a lead in, in a way (.) that (.) their bones are found (.) in the rocks and all these other things are found in rocks (.) and it's because of the different rocks and how they were laid down, that their (.) remains were found. (Female respondent, 65 +, Lyme Regis focus group)

> Find me a four year old child that isn't interested in dinosaurs. (...) They (.) they come up with these long names and they can pronounce them all. They might not be able to say 'sausage', but they can say (.) 'Stegosaurus'. (Female respondent, 40 - 55, Wareham focus group)

The Charmouth Heritage Coast Centre organises fossil related activities for children and conducts guided fossil walks which may attract in the region of 200 individuals during the summer months. The high attendance of such walks indicates the extent to which fossil collecting may incite popular interests. Dinosaur and fossil narratives may create effective links with geographical and geological themes of rock formation, landscape evolution and timescales along the Dorset coast (see *Figure 5.iv*).

The significance of the Dorset coast in terms of dinosaur and fossil prehistory is such that Newth (1994:45) has written:

> Had Steven Spielberg been a Dorset man, he might well have drawn inspiration for his block-busting film, *Jurassic Park*, from the Lyme Regis area.

Spielberg's box office hit resulted in extensive popularisation of dinosaur interest through the employment of complex cinematic technology and animated reconstructions of dinosaur life. The title of the film, *Jurassic Park*, accentuates the obvious links between dinosaurs and the Jurassic geology of the Dorset coast. The film release was thus particularly valuable for the region, enhancing awareness and interests in its prehistoric landscapes:

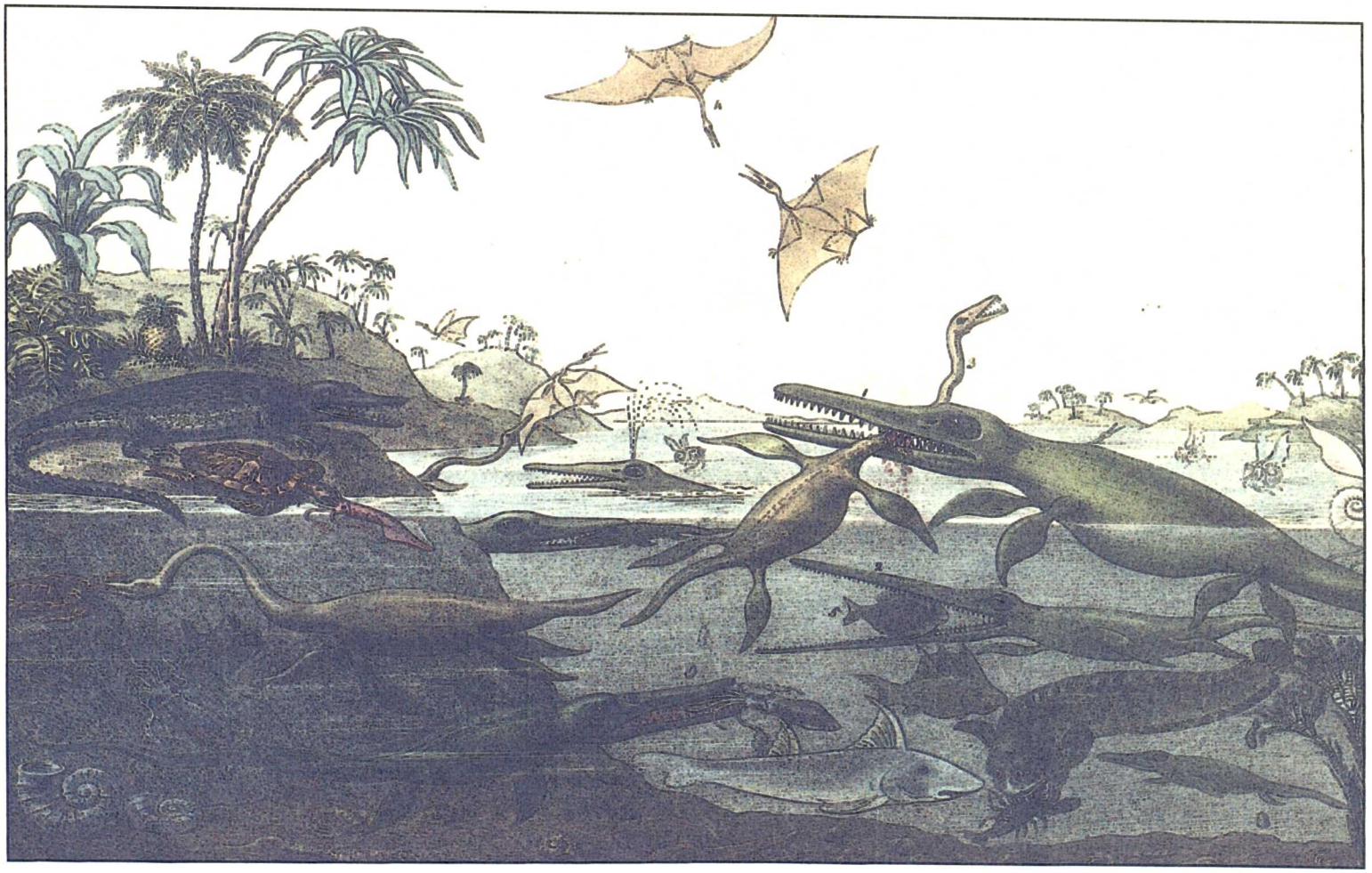


Figure 5.iv: *Duria Antiquior* (Ancient Dorsetshire), a hand-coloured lithograph by Henry de la Beche (1830) depicting Dorset's geological past.

> The Jurassic name had been there for years and years and years, and then suddenly you had *Jurassic Park* (.) and it became a buzz word didn't it? (..) We (.) nobody (.) you said Jurassic before (.) *Jurassic Park* came out but nobody really (.) unless they were out of geology background, really (.) focused on it. But as soon as *Jurassic Park* the film had been there (..) and people realised that this was the Jurassic Coast (..) it (.) it really was (...) and then suddenly you talk about the other, the Cretaceous and no one knows what you're on about! (Geography teacher, Dorset secondary school)

Prior to the release of Spielberg's film, the term 'Jurassic' was confined to academic spheres alongside the terms 'Cretaceous', 'Triassic' and 'Carboniferous'. Now, however, 'Jurassic' popularly relates to the period in which dinosaurs *were* alive. A child attending a *Jurassic Coast Project* guided walk on the Isle of Portland arrived expecting to learn about dinosaurs and to be shown fossil footprints and skeletons. He was clearly disappointed that the walk was in fact geology based, until his eyes were opened to the broader implications of the term 'Jurassic' through the rocks, fossilised trees and wildlife of that period.

The popular appeal of inherently geographical activities such as fossil-collecting and aesthetic appreciations of Dorset's coastal landscape creates opportunities for the development of public interests and knowledges in physical geography. However, Uzzell (1998*b*) suggests that personal and active encounter is not fully effective as a learning process without a degree of educational input. To promote interests and understandings, therefore, the geographical landscapes and resources of the Dorset coast must be interpreted.

5.3.2 Interpreting Dorset's coastal geographies

Uzzell (1998*b*:246) suggests that the educational value of interpretation lies with the need for visitors to be "told what is unique about the place they are visiting". He writes, "visitors cannot be assumed to

recognise the significance and meaning of objects or places from the objects or places themselves". Landscape appreciations and physical encounters during leisure time may not automatically generate connections between popular experiences of geography and opportunities for informal geographical learning. Interpretation may thus enable individuals to contextualise and attribute meaning to their tourism encounters (Markwell & Weiler, 1998). However, interpretation of Dorset's coastal geographies relies upon the voluntary participation of individuals (Lee, 1998). The mechanism of display and information exchange adopted is thus important in encouraging popular involvements in informal learning.

Approaches to landscape interpretation have changed considerably since being introduced in the UK during the 1970s (Ford, 1975). Traditional methods focused upon the ideals of dissemination (Stevens, 1989; Gottesdiener, 1993; Hartman, 1997), i.e. the passive provision of information by experts with the fundamental aim of improving the understandings and attitudes of the homogeneous and presumably ignorant public (Moscardo & Pearce, 1986). The past three decades have generated an increasing recognition of the value of interaction in interpretation; in particular an acknowledgement of the roles of individuals in productions, consumptions and translations of knowledge (Cheung & Taylor, 1991; Dierking, 1998; Ballantyne, 1998). Interactive approaches "[regard] the audience as actively making sense out of the interpretation and relating it to their experience and world view" (Uzzell, 1998*a*:18). Recognition of the roles of audiences in interpretation has resulted in extensive modification of the purpose and format of display.

Changes in the techniques and principles of geographical / geological interpretation may be clearly demonstrated through the example of the museum. In Dorset, the principal museum is the Dorset County Museum, located in Dorchester. The County Museum incorporates a geological gallery which conforms closely to the traditional ideals of interpretation. The gallery comprises a series of glass cabinets containing rock, fossil and mineral specimens arranged according to their place within the geological timescale

(see *Figure 5.v*). The specimens are labelled and extensive textual information is displayed on nearby panels. The degree of specialist geological interpretation provided is such that the gallery is unlikely to appeal to visitors unless they possess substantial geological knowledges. Pennyfarther (1975; see also Uzzell, 1998*a*,*b*; Knell & Taylor, 1989) suggests that the glass cabinents prominent within traditional displays represent metaphorical 'psychological barriers' to informal learning amongst non-specialist publics.

Methods of geological display within the Dorset County Museum have been widely criticised, particularly by those involved in interpretation elsewhere in the county:

> I think the County Museum is due a re-display (..) before (.) it can make any claims to be at the cutting edge of what's going on in geology. (Geological expert, Dorset Museums Advisory Service)

> I think that the County Museum (.) are scandalously neglectful in (.) their (..) geology. (..) They (.) what they've got they don't look after, they won't let anyone else look after it for them, there isn't a geologist (..) and if it's Thomas Hardy they'd pawn their grandmother's socks for it (.) and er (.) you know if it's geology they don't want to know. (Volunteer, Charmouth Heritage Coast Centre)

The failure of the County Museum to represent the contextual and popular relevance of rock and fossil specimens may result in low levels of visitation to the geology gallery. Low museum attendances are reflected within wider fields of traditional interpretation (see Uzzell, 1998*a*). Merriman (1991:119; see also Hood, 1983; Hooper-Greenhill, 1987; Lewis, 1987) notes that "museums are one of the least enjoyable means of finding out about local history".

Recognition of the failure of traditional museums to provide popular and accessible interpretative environments for the acquiring of knowledge has prompted the emergence of a new generation of display (Bradburne, 1998). New museums focus upon dynamic, interactive and personal approaches to interpretation and encourage the visitor to construct individual readings and

Figure 5.v: The geological gallery of the Dorset County Museum, Dorchester.

meanings from displays and experiences (Uzzell, 1998*a*; see also Pennyfarther, 1975). The recently renovated Geological Museum in London (now the *Earth Gallery* of the Natural History Museum) represents a clear example of a new generation geological display (see *Figures 5.vi* and *5.vii*). The gallery presents the visitor with opportunities to touch or handle artefacts and specimens, and includes a well-equipped and supervised laboratory for the observation or study of rocks and fossils. Displays incorporate modern technology and IT to demonstrate geomorphological processes, for example, the earthquake simulator which is set within a reconstructed grocery store and shows actual CCTV footage from a shop struck by an earthquake event in Taiwan. New style museum display does not aim to provide the visitor with as much information and detail as possible, but presents key themes which may be consumed, contemplated and translated (Uzzell, 1998*b*). Urry (1991; see also Moscardo & Pearce, 1986; Light, 1995) suggests that new approaches to interpretation constitute 'edu-tainment', combining educational aspects of display with entertainment and enjoyment.

Within Dorset, the life-size reconstructions and interactive displays in the Dorchester and Lyme Regis Dinosaur Museums – which contain elements of geological interpretation through links to fossil finds and the Mary Anning story – provide the only clear examples of new generation museum display. However, beyond formal museums, similar experiences may be encountered within the county's coastal heritage centres. There are six heritage centres in Dorset which provide a focus for the interpretation of the coastal landscape and environment. The centres are located at Studland Beach, Durlston Country Park, Kimmeridge Bay, Lulworth Cove, Chesil Beach and Charmouth. Each centre has a specific interpretative focus, with only Lulworth and Charmouth being primarily geographically or geologically based. The other centres focus upon the shoreline and marine wildlife, ornithology or coastal ecosystems, but frequently include information relating to the region's geography.

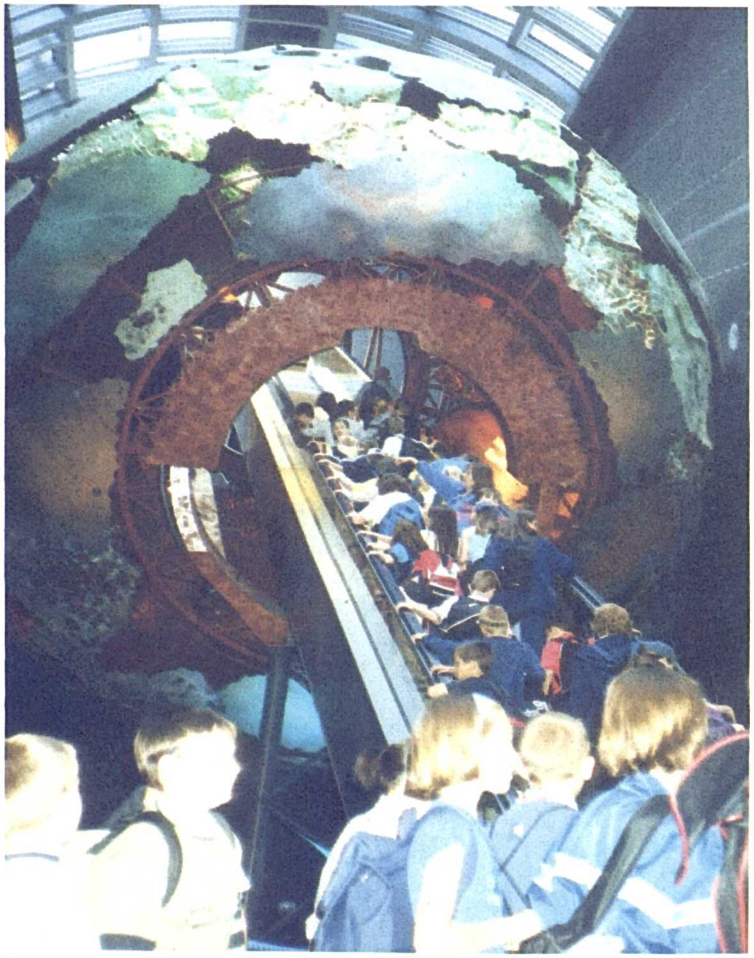


Figure 5.vi: The Earth Gallery of the Natural History Museum, London: entrance to the gallery.

Figure 5.vii: The Earth Gallery of the Natural History Museum London: Year 6 pupils interacting with a display on plate tectonics

Interpretation within Dorset's heritage centres revolves primarily around the encouragement of participation and interaction. The centres may include 'touch tables', providing fossils, rock samples and marine debris for close examination and handling. Pennyfarther (1975:32; see also Stone, 1994*a*,*b*; Ingle, 1999) suggests that "the appreciation of many objects can be enhanced if visitors are enabled to handle them". Interpretation is often attempted through the employment of IT media. The Charmouth Heritage Coast Centre incorporates a CD-ROM on fossil identification, and the Lulworth centre displays an Internet link to the satellite mapping of weather systems over the UK. IT is a particularly attractive form of interpretation amongst children (Bale, 1996). Heritage centres may also encourage interaction by providing binoculars for the observation of birds and wildlife (for example at the Chesil Beach centre), or tanks of live marine creatures from local rock pools (for example at the Charmouth and Kimmeridge centres) (see Pennyfarther, 1975).

A personal approach to interpretation is often considered the most effective method of encouraging interaction amongst visiting publics (Markwell & Weiler, 1998; see also Merriman, 1991). Indeed, Pennyfarther (1975:10) argues that "direct personal contact with the visitor, provided by an expert ranger or guide, is the only really effective method of communication". Dorset's heritage centres are supervised by countryside rangers who provide information and organise activities for visiting publics. The rangers may lead guided walks in the vicinity of the site, enabling them to exchange knowledges and enthusiasm for the environment and landscape with attending individuals. The ranger's role as 'enthuser' was stressed at Lulworth Heritage Centre:

> Out and about on the site is obviously the best way [of interpreting the landscape] (.) with someone who (.) who knows about the area who can enthuse people. (Countryside ranger, Lulworth Heritage Centre)

Markwell & Weiler (1998:106; see also Pennyfarther, 1975) suggest that the guided walk constitutes an important 'active learning' experience. "The

involvement of visitors in the learning process, using techniques such as questioning, providing opportunities for visitor questions and feedback, the use of the senses (touching, smelling, tasting)" establishes the guided walk as an ideal framework for active learning within the field of geographical interpretation; a concept supported by a National Trust officer:

> I think (..) geological interpretation is best through guided walks (...) provided you've got the right people doing it (..) someone will make (.) any boring topic really exciting if you've got the right person to do it. (..) Yeah (.) and who really enthuses about the subject. (National Trust Officer, Corfe Castle)

Discussion surrounding the benefits of different approaches to interpretation is extensive, but a true measure of their success may be obtained from the preferences of popular audiences. Within Dorset, 22% of visiting publics encountered (n=234) stated that they would prefer to visit a heritage centre or attend a guided walk in order to obtain further information about the coastal landscape. The figure compared with only 6% who would visit a museum, supporting Merriman's suggestion that museums lack popularity as media for interpretation (Merriman, 1991). Indeed, preferences for heritage centres over museums were highlighted by a volunteer at the Charmouth Heritage Coast Centre:

> There was a very interesting statistic in Monday's Echo (.) that the County Museum were very pleased because they had 41,234 I think it was (.) visitors last year. (..) The Charmouth Heritage Coast Centre, albeit quite a lot of them were schoolchildren (.) had 44,000 or so in the same time (.) They didn't go to the er (.) Charmouth Heritage Coast Centre to look at Thomas Hardy, did they? (Volunteer, Charmouth Heritage Coast Centre)

Forty-six per cent of visiting publics stated that they would initially consult a leaflet or book in their search for information about the Dorset coast. This figure suggests that although new interactive and participative media are emerging within Dorset – particularly through the coastal heritage centres – and are considered highly effective to learning and the development of understandings (Hood, 1983; Moscardo & Pearce, 1986), it is still traditional

methods of interpretation that visiting publics consult in their search for information. Preferences for books and leaflets perhaps relate to issues of awareness. The introduction of new interpretation methods, although appreciated by visiting publics in the centres that they visit, may not yet have filtered through to replace traditional methods in terms of approaches to information seeking.

Themes encountered thus far correspond with the recognition that specialist tourism opportunities and demands are increasing within Dorset. The specialist experiences already promoted – related to, for example, literature, wildlife and archaeology – may contain elements of geographical interest, but links to the subject may frequently be disregarded or ignored. Raising awareness and interest in geography amongst popular audiences is important on three counts. First, the current popularity of specialist tourism encounters brings economic benefits to Dorset. Additional promotions may increase visitor numbers further. Second, Dorset County Council (Edmonds, 1998*a*; see also Moore, 1987; Keene, 1993; Wilson, 1994; Burek & France, 1998) maintains that increasing awareness of the coastal landscape and geographical / geological resource amongst publics may have positive implications for conservation. Third, the forging of popular links with the seemingly academic subject of geography may strengthen the discipline as a whole, especially in the face of declining student numbers within secondary school and higher education. Museum interpretation of Dorset's geographical landscape is poor. The provision of information to accompany popular pursuit is thus undertaken primarily through the media of coastal heritage centres, enabling participation, interaction and the construction of individual geographical knowledges.

The remainder of this chapter has been divided into two subsections. The first investigates the values attributed to aspects of Dorset's coastal environment by visiting publics, determining whether individuals place value upon the geographical and educational elements of popular activity. The second subsection focuses upon the geographical interpretation accompanying popular activities. The importance of Dorset's heritage centres

in providing interpretation has already been established, but questions concerning whether visiting publics learn about geography at the coast are raised.

5.4 The value of Dorset's coastal landscape to visiting publics

In Dorset, the primary geographical resource is the coastal landscape. It is this landscape upon which geographical and geological interpretation within the county is focused. It is this landscape which acts as the backdrop for touristic activities and experiences pursued in the coastal area. Uzzell (1998*a*) notes that recognition of the values attributed to landscapes by publics is paramount in the construction of meaningful interpretation encounters. However, research into the configuration of such values remains limited. Lowenthal (1986:1) writes:

> How landscapes are identified and thought about; what components and attributes are discussed and admired; what symbolic meanings and physical properties they embody; how purpose, intensity, duration, realism, novelty or impending loss affect our landscape experience - these are questions of immense import for which we have few if any answers.

Too frequently, interpretation fails to be of relevance to the affective and cognitive spheres of individuals (Stevens, 1989; Gottesdiener, 1993; Dierking, 1998; Uzzell, 1998*a*). The aim of this study is thus to explore the values, meanings and perceptions attributed to the Dorset landscape by visiting publics. Particularly important within the field of informal learning is the extent to which publics recognise the geographical and pedagogical values of the coastline. Developments of landscape values may be influenced by both individual and broadly cultural factors.

5.4.1 Landscape values

Landscape is considered by some authors to be socially constructed. Craik (1986:48; see also Penning-Rowsell, 1986) writes, "landscape itself I take to be a human phenomenon, an emergent of the interplay between the observer, on the one hand, and landform and landuse on the other". Without an observer, landscape cannot exist (Porteous, 1990; see also Cosgrove, 1984; Muir, 1999). Cosgrove (1989; see also Daniels & Cosgrove, 1988; MacCannell, 1989) suggests that landscapes have symbolic meanings within cultures and societies and the socio-cultural conditioning of the observer creates 'cultural filters' (Mordue, 1999) which influence the valuation, description and interpretation of landscapes, generating a diversity of readings (Forsyth, 1998; see also Blaut, 1980; Craik, 1986; Driver, 1992; Norton, 1996; Penning-Rowsell & Burgess, 1997; Young, 1999). 'Cultural filters' may be affected by individual encounter, learning and context (Craik, 1986), alongside the wider cultural parameters of society (Goodey, 1986; Penning-Rowsell, 1986; Cosgrove *et al.*, 1996).

In 1986, Craik documented a recent shift within environmental psychology towards the study of cognitive and affective representations of landscape. Of particular relevance to this study is the manner in which representations are verbalised by individuals to express values of landscape attributes. Goodey (1986) has criticised the language adopted within verbalisations of landscape perceptions, highlighting the absence of affective contributions to representation. He notes 'a dreadful poverty' in the expression and emotional contribution of perceptions, with description reduced to such epithets as 'nice', 'lovely' and 'breathtaking'. "The language of landscape appreciation, once richly expressive, has lost its interest over the past two centuries and has become degenerate, cliché-ridden and poverty stricken" (Penning-Rowsell, 1986:119-20; see also Craik, 1986).

Descriptive and expressive representation has been superseded by the use of symbols and signs for the categorisation of landscapes (see also Muir, 1999). Symbols are products of human 'appropriation' and

'transformation', yet may have a significant influence upon landscape perceptions. Hopkins (1998) links the use of symbolisms within perception to the rise of an 'image-driven' and 'media-fuelled' society which creates 'myths' of imagined countryside. The symbolic format in which publics frequently perceive and value landscape encounters warrants a semiotic approach to study. Such analysis investigates the symbolic meanings of signs and systems of sign production (Hopkins, 1998; see also MacCannell, 1989).

5.4.2 A semiotic approach to landscape valuation

During a study which focused upon the promotion and marketing of a region of rural Ontario, Canada, Hopkins (1998) adopted a semiotic approach to the analysis of texts and images within tourism advertising. Hopkins' approach was socio-semiotic, involving the derivation of socially-contextualised meanings from signs and symbols promoting landscapes and countryside. Within this chapter, socio-semiotic analyses focus upon the verbalised landscape representations of visitors to the Dorset coast. Each respondent was required to symbolise his or her individual perceptions of the coastline to achieve a recognition of the values placed upon aspects of the geographical landscape. Broader survey questioning provided an indication of the degree to which landscape perceptions were individually or culturally influenced, enabling contextualisation of the response.

A total of two hundred and thirty four respondents[6], visiting locations along the length of the Dorset coast including heritage centres, accommodation and coach tours were approached and asked to express their perceptions of the coastline in three descriptive words. The words chosen symbolised individual readings, interpretations and constructions of the coastal landscape, indicating the value-ladenness of specific features and attributes. Within his study of tourism materials, Hopkins constructed four

[6] In cases where the informant failed to select three words or where textualisations were non-descriptive, e.g. "It's the best", responses were withdrawn from this aspect of the study. As a result, the total number of respondents may sometimes be fewer than the grand total of n=234.

categorisations with which to classify texts and images: environment, community, location and heritage. Textual responses within this study could have been incorporated into much the same categories, but an unpacking of key themes enabled further subdivision of value attribution. The nine themes, alongside an outline of their descriptive content and symbolic examples, are listed within *Table 5.i.* Further details of selected words are included within *Appendix 5.1.*

	Description	**Examples**
1. Aesthetic	Symbolising the aesthetic nature of the coastline.	*beautiful, scenic, picturesque*
2. Descriptive	Describing the physical nature of the coastline.	*clean, rugged, varied*
3. Features	Referring to specific physical features of the coastline.	*beaches, scenery, sea*
4. Activity	Referring to activities that are pursued in the coastal area.	*walking, lots to do, wildlife*
5. Experiential	Symbolising the holiday experience.	*holiday, good for kids, convenient*
6. Atmospheric	Symbolising the atmosphere of the coastal area.	*quiet, peaceful, relaxing*
7. Weather	Referring to aspects of the weather.	*good weather, wet, windy*
8. Pedagogic	Relating to the educational interest of the coastline.	*interesting, historical, renowned*
9. Geographic	References to the geography or geology of the coast.	*geology, fossils, Jurassic*

Table 5.i: Themes of textual representation relating to the Dorset coast.

Figures 5.viii and *5.ix* provide diagrammatic illustrations of symbolic representations of the Dorset coast expressed by visiting publics. The data suggests that perceptions focus strongly upon the landscape, particularly its aesthetic nature but also incorporating its physical characteristics and features. Texts relating to the coastal landscape were not specifically requested within survey questioning, yet the majority of responses were descriptive of landscape attributes[7]. Visitors to the Dorset coast may thus apportion significant value to observations and experiences of landscape,

[7] The top three categories – 'aesthetic', 'descriptive' and 'features' – formed 66% of total responses (n=633).

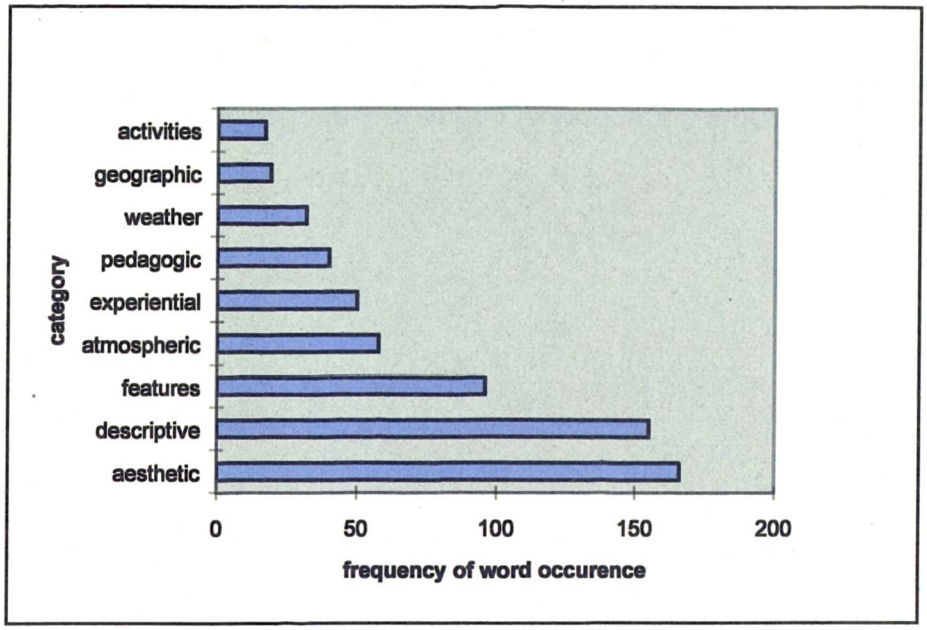


Figure 5.viii: Symbolising the Dorset coast: textual descriptions of the coastal landscape.

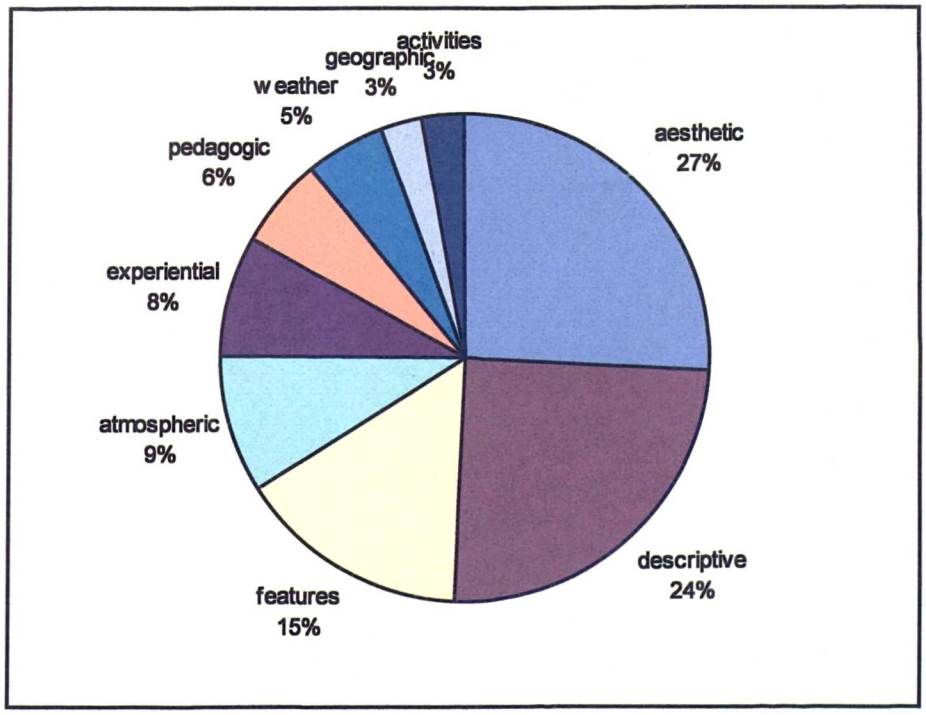


Figure 5.ix: Proportional occurrence of textual categories symbolising the coastal landscape.

supporting Hopkins' suggestion that the natural environment is "a central and highly valued characteristic" of tourist encounters (1998:76).

Descriptions of Dorset's coastal landscape were most frequently 'aesthetic'. *Beautiful* was chosen more than any other individual word, being employed by 25% of respondents to describe their perceptions of the coast (n=211). Other popular aesthetic words included *scenic* (16%), *picturesque* (11%) and *spectacular* (5%). Aesthetic representations were similarly prominent within the verbalisations of local publics:

> I love the [Dorset] countryside (...) erm altogether, just all of it (.) every single thing about it. It's the most beautiful place on earth in my opinion. (Female respondent, 55 - 65, Wareham focus group)

> If you go the length and breadth of the country you'll always get views wherever you go (.) but Dorset's got the lot. (Male respondent, 65+, Bridport focus group)

However, respondent textualisations reinforced Goodey's suggestion that landscape descriptions are frequently unimaginative and predictable (Goodey, 1986). Goodey's specific examples – 'nice', 'lovely' and 'breathtaking' – all emerged within responses[8].

The 'descriptive' theme of semiotic classification included variable textual representations. Prevalent words ranged from *clean* (used by 15% of respondents, n=211) and *natural* (7%) to *rugged* (11%) and *varied* (12%). Individual respondents were able to construct very different representations of the coastal landscape through their selection of words. "*Varied, powerful, rugged*" (Lulworth Heritage Centre respondent) conjures up a contrasting image to "*beautiful, calm, hilly*" (Lulworth Heritage Centre respondent), despite each selection being descriptive of the same landscape resource. Disparate responses were indicative of both the physically variable coastal

[8] Within responses to all questions, i.e. including 'What are the main reasons you have come to Dorset?' and 'What do you like about the coast?' (see *Appendix 3.1*), the word *nice* was used by 14% of respondents, *lovely* by 6% and *breathtaking* by 2% (n=234).

resource in Dorset and the different values attributed to the landscape by individual respondents.

Responses within the 'features' category of textual representation highlight those aspects of the coastal landscape which may be specifically valued by visiting publics. Mentions of the *beaches* (cited by 10% of respondents, n=211) *sea* and *safety* (4%) – which were also popularly stated as reasons for visitation – suggested that although traditional 'sun, sea and sand' holidays of southern England have undergone considerable decline over the past three decades (Williams & Shaw, 1997; Löfgren, 1999), Dorset's beaches may still constitute an attraction amongst tourists. However, most frequent mentions were made of the *scenery* (24%), *coastline* (15%) and *countryside* (9%). These responses may represent trends towards the diversification and specialisation of Dorset's tourism industry. The valuing of the scenery and coastline suggests the existence of alternative touristic interests and variable reasons for visitation within the county. The popularity of responses within the 'features' categorisation supports the suggestion of Craik (1986) that the conceptual classification of landscape on the basis of general constructs such as 'sea', 'mountain', and 'meadow' is a prominent feature of landscape description.

The verbal representations of respondents indicated that popular audiences may frequently place value upon the aesthetic nature and specific characteristics of Dorset's coastal landscape. Perceptions of the pedagogic or geographical value of the coast were rare. Geographic representations formed just 3% of all words used (n=633) and were predominantly related to the *rocks* and *fossils* (cited by 2% of respondents (n=211) each). Although the physical features of the coast were widely mentioned, references to specific landforms formed less than 1% of representations (n=633); Chesil Beach and Durdle Door were the only two landforms cited. General pedagogic representations were also rare, forming 6% of total words (n=633). References within this theme were vague, with *interesting* (15% of respondents, n=211) and *historical* (2%) constituting over half of pedagogic mentions. Indication that respondents do not value the Dorset coast for

specifically educational or geographical reasons supports the findings of Prentice (1991; see also Wagoner, 1989), that tourists may tend to seek leisure as opposed to educational experiences whilst on holiday. Furthermore, it suggests that popular audiences may fail to recognise the complementarity which may exist between leisure and education encounters (see Urry, 1991; Stebbins, 1992, 1996).

5.4.3 Influences on perception

The verbalised representations of individuals – symbolising their perceptions of the Dorset coastline – clearly indicate the value placed upon landscape, in particular its aesthetic nature. Less clear are the reasons behind specific choices of texts. Perceptions and value-attributions may be influenced by socio-cultural conditioning, alongside the experiences, learnings and encounters of the individual (Goodey, 1986; Penning-Rowsell, 1986; Cosgrove *et al.*, 1996).

5.4.3.1 Culturally-generated influences on perception

Vosniadou (1994; see also Pettus, 1976; Wendling, 1989; Swonke, 2000) suggests that perceptions of the environment may vary between different cultures as a result of predominant religious, scientific and social beliefs (Boyer, 1994). Individuals with similar cultural backgrounds may thus possess similar attitudes towards landscape. Goodey (1986:84; see also Matless, 1999) has proposed a set of characteristics which he suggests constitute a stereotypical English landscape perception:

> I have little doubt that the distant view of green, rolling, wooded hills with clusters of vernacular buildings, indicative of man's rooted, harmonious consort with time and nature, offer the greatest potential for peace and calm (Patience Strong calendars *passim*). In this sense there is an 'English Landscape Taste' which seems culturally transmitted and which is likely to be endorsed by the majority.

Examples of cultural influence were evident within textual representations of the Dorset coastal landscape. Frequent use of the term *beautiful* suggests an aesthetic appreciation of the 'type' of landscape encountered within Dorset. Culturally-contextualised landscape images were expressed which clearly related to Goodey's English landscape representation:

> England as it was. (Shirley Hotel respondent)
>
> Green, blue, beautiful. (Lulworth heritage centre respondent)
>
> Little villages and thatched cottages. (Lulworth heritage centre respondent)
>
> Rolling hills and pleasant land. (Coach tour respondent)
>
> The quiet and charm of the hills and dales, the rugged beauty of its rock formations, a landscape of contrast and variety – a coastline of jagged rocks, stone cliffs, sand, shingle, pebbles all in colours of white, black, yellow, grey and red mingling together with green fields. (Local resident)

Penning-Rowsell (1986:119) suggests that literature and art may have a similar influence upon individual landscape perceptions. He writes, "visitors appear to have different landscape aspirations, often created by artists or novelists ('the Bronte country'). We are thus preconditioned with expectations and preferences from literature and painting". Mentions of literary authors were rare amongst respondents' reasons for visiting Dorset[9], but the visitation of directly related sites such as Thomas Hardy's cottage in Higher Bockhampton and the Hardy galleries of Dorset County Museum suggests that literature may make a significant contribution to tourism in Dorset. Many of Hardy's novels include vividly descriptive imagery of the Dorset landscape, often incorporating elements of Goodey's proposed English cultural representation:

> The outskirts of this level water-meadow were diversified by rounded and hollow pastures, where just now every flower that was not a buttercup was a daisy. The river slid noiselessly as a shade, the swilling reeds and sedge

[9] Thomas Hardy was mentioned by only two respondents.

> forming a flexible palisade upon its moist brink. To the north of the mead were trees, the leaves of which were new, soft and moist, not yet having stiffened and darkened under summer sun and drought – their colour being yellow beside a green – green beside a yellow. From the recesses of this knot of foliage the loud note of three cuckoos were resounding through the still air. (Extract from chapter 19 of Thomas Hardy's *Far From the Madding Crowd*, originally published in 1874 and cited in Galvan, 1998)

In addition, West Dorset District Council (1999) has estimated that over 5,000 tourists were attracted to West Bay during the summer of 1999 as a result of its positive portrayal within the BBC television drama *Harbour Lights*. Aesthetic descriptions within literature and the use of the landscape as a backdrop for romantic or dramatic visualisation within films and television may influence landscape appreciations amongst Dorset's visiting publics, preconditioning individual perceptions of the coastal landscape.

5.4.3.2 Individual influences on perception

Perceptions of the Dorset coastline appear to be at least partially influenced by cultural contextualisation, with further contributions from media, literature and film representations. However, perceptions may also be influenced by individual experience (Stevenson, 1993; Endersby, 1997). Blaut (1980; see also Ortner, 1974; Tuan, 1974; Avery, 1988) suggests the existence of a 'cultural matrix' through which perceptions are formed, based upon individual ethnicities, genders, cultures and classes. Lowenthal (1978:385) adds that the context in which landscapes are encountered may further influence perceptions, depending upon "mood and circumstance, weather and light and time of day, view from on foot or in a vehicle, stationary or in motion, deliberately chosen or accidentally come upon". Individuals may possess pre-formed images of landscape as a result of previous encounter (Squire, 1988). Thirty-two per cent (n=234) of respondents within this study stated that an earlier visit had influenced their decision to return to Dorset. Respondents who had not previously been to the county expressed variable reasons for visitation, which may also have preconditioned their perceptions of the coastal landscape (see MacCannell, 1989):

> I've been told by several people that it is a beautiful area. (Waterside Holiday Park respondent)
>
> A friend recommended it. (Burton Cliff Hotel respondent)
>
> It looked nice in the brochure. (Waterside Holiday Park respondent)
>
> I'd heard about its views. (Lulworth Heritage Centre respondent)
>
> It was advertised in the Daily Mail. (Charmouth Heritage Coast Centre respondent)

The aesthetic nature of the Dorset coastal landscape is frequently valued by visiting publics. This may result in part from a socio-culturally generated dissatisfaction with modern banality and lack of individuality (Urry, 1990; see also Penning-Rowsell & Burgess, 1997). More diverse and personal factors may also influence values of the aesthetic landscape. Urry (1990; see also Squire, 1988) argues that the prevalence of aesthetic appreciations within landscape perceptions may result from a phenomenon he terms the 'romantic gaze'. Romantic gazing upon the landscape involves "solitude, privacy and a personal, semi-spiritual relationship with the object of the gaze" (1990:45), providing an opportunity for reflection and nostalgic reminiscence on childhood or days gone by (Lowenthal, 1978, 1985; Shoard, 1981; Squire, 1988; Palmer & Neal, 1994; Penning-Rowsell & Burgess, 1997; Mordue, 1999). Hopkins (1998:76) found within his study of rural advertising that "the past is often held in high esteem" by tourists. In Dorset, nostalgic recollections amongst visiting publics frequently related to childhood holidays, family and happier times:

> We've been coming here since we were children, so it has lots of memories. (Ulwell Cottage Holiday Park respondent)
>
> I came here on a childhood holiday when I was 13. I remembered it and wanted to return. (Lulworth Heritage Centre respondent)

> My grandparents used to live here so it's a bit of a memory trip. (Charmouth Heritage Coast Centre respondent)
>
> I used to come here a lot with my husband when he was alive. It is a very special, beautiful place. (Golden Cap Holiday Park respondent)
>
> We were at college here so we're reminiscing. The scenery is beautiful. (Chesil Beach Centre respondent)

Burgess *et al.* (1988:460) suggest that the positive memories conjured up by nostalgic reflection upon place create a "profound sense of personal satisfaction" and feelings of affection for landscape. Such feelings may be reflected within the aesthetic content of landscape representations and may create a desire for landscape to remain preserved and unchanged:

> Our attitudes towards landscape are static and preservationist. We hope the landscapes we love will endure, despite the pressures we also put on them; we seek stability rather than change. (Penning-Rowsell, 1986:116).
>
> I know things don't stand still (.) but it would be nice if (.) generations to come could see it the way we've seen it (..) especially the coast road (.) through Abbotsbury along (.) and through to Weymouth that way. (.) It really is so nice I think (.) and I hope it will (.) sort of be able to remain like that. (Female respondent, 65+, Bridport focus group)

Linked to notions of the aesthetic rural, evidence emerged within this study which suggested that Dorset may be perceived by many visitors to constitute a significant contrast to their home environment. City-dwellers in particular (25% of total respondents, n=234) expressed a dissatisfaction with the urban environment, representing the peaceful, calm and leisurely rural as a 'retreat' from the stressful, crowded and polluted city. The value responses of city-dwelling individuals incorporated a 7% increase in the proportion of words relating to the 'atmosphere'[10] of Dorset compared to the total responses represented within *Figure 5.ix*.

[10] 'Atmospheric' words relate to aspects of the coastal environment such as the peacefulness (mentioned by 6% of respondents, n=211), quiet (4%) and relaxation (4%), forming 9% of total responses (n=633) but 16% of the responses of city-dwelling visitors (n=174).

In contrast to the perceptions of city-dwelling publics, Hopkins (1998:76) suggests that notions of the rural "as 'pastoral retreat', a place to escape one's own urban world of work, responsibility and routine, and adopt a simpler, more natural, 'rustic' way of life" constitute a 'myth' of the countryside. Preconditioned perceptions of the rural may construct images of tranquillity and simplicity which may subsequently be invalidated by the environment encountered:

> The rural as a pastoral retreat from the urban and everyday rings hollow when congested roads, parking problems, line-ups, entrance fees, environmental degradation and blatant commercialism persist. (Hopkins, 1998:77)

Much of the Dorset coast remains relatively untouched by commercialism. Stretches of beach and coastline, for example around Ringstead Bay and Chapman's Pool, are unpromoted and almost deserted throughout the year. Yet visitors to the coast tend to accumulate at 'honey-pot sites', including the traditional resorts of Bournemouth and Weymouth and the increasingly popular landscape sites of Lulworth Cove and Studland. Here, the 'countryside' may be commercialised, overcrowded, noisy and polluted. The discovery of negative traits which did not correspond to preconceived imaginations of the rural caused expressions of disappointment and dissatisfaction amongst respondents (compare MacCannell, 1989):

> Lulworth Cove is a bit grubby. (Lulworth heritage centre respondent)

> It's a bit busy and touristy. (Lulworth heritage centre respondent)

> The roads are busy and the parking pricey. (Charmouth Heritage Coast Centre respondent)

The aesthetic appreciation of landscape, therefore, may be influenced by a variability of factors including nostalgia, romanticism and rural imaginations. Individuals may possess preconceived perceptions of the coastal environment which affect their verbalised representations over and above the visual appearance of the landscape.

The contemporary search for different, unique and natural holiday experiences and the expansion of specialist tourism (Urry, 1990; see also Fiefer, 1985) has created a diverse situation whereby tourists attribute value to variable aspects of the coastal landscape depending upon the context in which it is encountered (Lowenthal, 1978; Penning-Rowsell, 1986). 22% of respondents (n=234), for example, stated that they were attracted to Dorset on account of a specific interest in walking the coast path. Examination of their responses provides an indication of aspects or attributes of the coastline that are specifically valued by individuals engaged in such special interest tourism. Walkers attributed greater value to specific features of the coastline, consistent with their experiences of the landscape. One in three walkers mentioned the scenery or views; the cliffs and coastline were other popular choices. Walkers also valued the relaxing and peaceful atmosphere of the coast path.

Ryan (1995:62) suggests that "holiday requirements vary as people mature and as their responsibilities to other family members change". The influence of family life upon the valuing of touristic experiences was explored through analysis of the responses of individuals visiting Dorset with children of primary school age or below (24% of total respondents, n=234). Families tended to highlight the importance of experiential and atmospheric aspects of the coast, those aspects which contributed to a successful holiday experience. Dorset's sun, sea and sand – or "sun, sea and scenery" (Waterside holiday park respondent) – were valued predominantly by families with small children, perhaps representing a remnant of the appeal of traditional seaside resorts and tourism activities. Urry (1990:86) suggests that the designation of value to traditional holiday aspects constitutes the 'collective gaze', "thoroughly based on popular pleasures ... [involving] not contemplation but high levels of audience participation; and there has been much emphasis on pastiche, or what others might call kitsch". Family responses attributed little value to pedagogic and geographic aspects of the coast, despite the apparent popularity of fossil collecting amongst young children.

Analysis of the perceptions of all groups of respondents indicated the low levels of value attributed to geographical and pedagogical aspects of the Dorset coast. Previous chapters have highlighted the significance of the coastal geography, but this is apparently seldom recognised amongst visiting publics. Investigation is thus required into the role of geographical interpretation in promoting informal learnings and enhancing recognitions of the pedagogical value of Dorset's coastal landscape.

5.5 Developing popular geographical knowledges of Dorset's coastal landscape

Visiting publics within Dorset have been found to attribute value to variable aspects of the coastal landscape and their perceptions may be influenced by widespread cultural factors and the experiences, knowledges and interests of the individual. Personal and individual perceptions and values of landscape are of equal validity to academic (formal) encounters and knowledges, but enhancing popular awareness of geography may have positive implications for the subject through increasing student recruitments, research fundings and conservation participations. Geographical and pedagogical values of the coast are seldom recognised by visiting publics. Approximately half of popular respondents were approached as they left the interpretative environments of Dorset's coastal heritage centres. Failure of these individuals to value geographical aspects of the landscape implies that heritage centres may have little success in generating geographical interests and knowledges amongst visiting publics. The role of interpretation in improving geographical understandings and values amongst visiting publics is thus a subject which requires further investigation. Individuals who had encountered formal education relating to the Dorset coast in the form of teaching or fieldwork were found to attribute greater value to geography[11] (see Palmer & Neal, 1994). The question of whether informal learning through

[11] Individuals who had learnt about the Dorset coast during formal education constituted 12% of respondents (n=234). Those who had visited the coast formed 8% of the total.

interpretation also correlates with increases in pedagogical value attribution is explored through the case study of Dorset's coastal heritage centres.

5.5.1 Informal geographical learning: a case study of Dorset's heritage centres

To investigate the geographical understandings and knowledges of visiting publics, respondents were asked whether they were aware of how key features along the Dorset coastline had formed. Contextualisation of findings was attained through the subdivision of respondents into groups of individuals approached following visitation of three coastal heritage centres located near the landforms in question, and those approached at unrelated sites (and who had not visited the centre). Subdivision of the visiting public sample to enable consideration of six individual respondent groups produced some resultant groups which contained a smaller number of individuals than would normally be considered representative of the original population. The findings generated from investigations into popular knowledges of geography should thus be interpreted as inferential rather than conclusive. To assist interpretations, the responses of informants were classified according to the levels of knowledge expressed. Five knowledge classifications were constructed and are defined in *Table 5.ii.*

	Category	**Description**
1	No attempt	No attempt made to explain the formation.
2	Wrong	A wrong answer given.
3	One process named	One process in the formation named, for example erosion, deposition, longshore drift.
4	Outline	A basic outline of the process(es) involved in formation.
5	Advanced	A detailed description of the formation process.

Table 5.ii: Classification of levels of knowledge expressed by respondents regarding elements of geographical landscape formation along the Dorset coast.

5.5.1.1 The Chesil Beach Centre

Chesil Beach is a 28 km shingle ridge or tombolo which joins the Isle of Portland to mainland Dorset. Conflicting views exist as to the exact processes which resulted in the formation of the structure, but the most commonly subscribed explanation is that it formed 10,000 years ago at the end of the last Ice Age as sea levels rose, driving sedimentary materials landwards. Chesil Beach is maintained as a result of an 8,000 km fetch which stretches across the Atlantic Ocean from South America and due to its orientation in the face of prevailing south-westerly winds. The Chesil Beach heritage centre is located at the eastern end of the structure on the shores of The Fleet, a 13 km coastal lagoon behind the shingle ridge (see *Figure 5.x*). The question "*do you know how Chesil Beach formed?*" was asked of publics who were visiting the interpretative facilities of the Chesil Beach Centre (n=25) or who were staying in accommodation close to the geographical landform site (n=61). *Figure 5.xi* represents the responses of informants who had visited the Chesil Beach Centre, who were approached following visitation. Respondents who had not visited the centre were questioned at accommodation close to Chesil Beach, including the Waterside Holiday Park, Weymouth and Freshwater Beach Holiday Park, Burton Bradstock (both caravan parks), The Crown and Rex Hotels, Weymouth and the Burton Cliff Hotel, Burton Bradstock. The responses of non-visiting informants are provided in *Figure 5.xii*. *Table 5.iii* provides examples of responses for the explanatory categories defined within *Table 5.ii*.

Category	Example of response
No attempt	No.
Wrong answer	"It materialised overnight as a result of a large storm". (Freshwater Beach respondent)
One process named	Longshore drift.
Outline	"It formed by the sea washing away the cliffs and breaking up stones which were washed up by storms". (Chesil Beach Centre respondent)
Detailed	"Chesil Beach was formed by deposition along the coastline. As the sea level rises and drops (regression), the beach front moves outwards and inwards, creating layers". (Rex Hotel respondent)

Table 5.iii: Examples per category of responses to the question, "do you know how Chesil Beach formed?"

Figure 5.x: **The Chesil Beach Centre, located on the shores of the Fleet.**

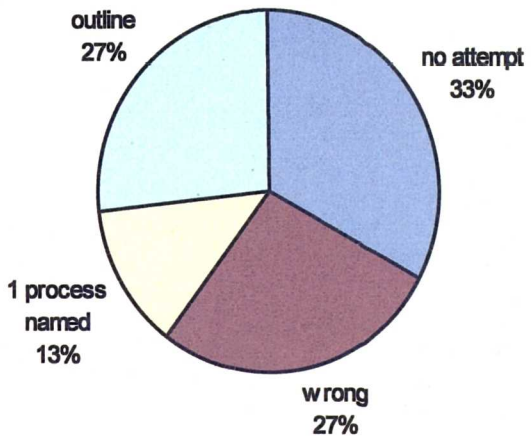


Figure 5.xi: Understandings of Chesil Beach formation amongst visitors to the Chesil Beach Centre.

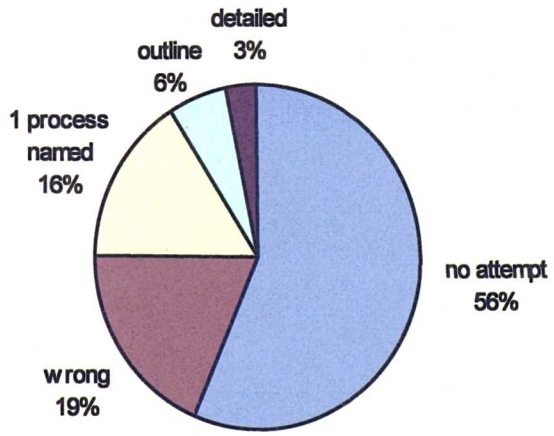


Figure 5.xii: Understandings of Chesil Beach formation amongst non-visiting publics.

Study of the responses of individuals who had / had not visited the Chesil Beach Centre enables some interesting comparisons to be drawn. Respondents who had visited the centre emerged as more likely to attempt an explanation of the formation of Chesil Beach than those from unrelated sites, and were similarly more likely to give an accurate outline of the processes involved. However, one-third of respondents still made no attempt to explain the processes, and wrong answers were also given. The high levels of incorrect response were surprising considering that respondents were approached as they left a heritage centre relating to the site in question, but may perhaps be explained by the fact that the Chesil Beach Centre is predominantly concerned with the interpretation of wildlife, with most displays featuring the birds and littoral flora and fauna of the site. The account of the formation of Chesil Beach lacks detail and employs an unattractive interpretative method (the interpretation board) to display information. Literature available for purchase or perusal on the formation of Chesil Beach is also limited, a fact highlighted by a resident geomorphologist:

> Would you believe that it is not possible for you to pick up a (.) a guide or an explanation to Chesil Beach? (...) I think it's absolutely appalling. (..) It's a gaping hole. (Retired geomorphologist, resident in Dorset)

A lack of information and interpretation concerning Chesil Beach may result from the continuing debate and uncertainty which surrounds the development of the landform and the complexity of the processes involved. Inconclusive understandings have caused the construction of myths concerning the formation of Chesil Beach. Responses such as 'it appeared overnight' or 'it is man-made' were commonplace, and equally likely amongst respondents who had visited the Chesil Beach Centre.

In terms of non-visitors, failure to attempt an explanation of Chesil Beach formation constituted over half of responses. Only one-quarter of respondents gave correct answers, predominantly naming single processes. Unlike visitor publics, detailed responses were encountered. However, this anomaly was due to a group of postgraduate geology students who were

accommodated at the Rex Hotel in Weymouth, several of whom gave detailed explanations of Chesil Beach formation. The formal education encounters of these respondents were such that their detailed responses could be considered unrepresentative of many popular audiences.

Within the responses of non-visitors, a particular anomaly emerged. A number of respondents questioned at the Freshwater Beach Holiday Park in Burton Bradstock indicated that they believed Chesil Beach had appeared overnight as the result of a large storm. The frequent occurrence of this response at a single site was unusual and informants were thus asked to divulge their source of information. It became apparent that a misrepresentation of the formation of Chesil Beach was included within the visitor guide provided to guests on their arrival at Freshwater Beach Holiday Park. The guide contained a reference to Chesil Beach, giving the following explanation for its formation:

> Local legend says that Chesil Beach appeared overnight during a phenomenal storm and it is often referred to by local fishermen as the eighth wonder of the world. (*Freshwater Beach Holiday Park Visitor's Guide & Park Information 1999*)

The booklet highlighted the 'local legend' status of the explanation, but the absence of any further information on the formation of Chesil Beach may have led many visitors to accept the misrepresentation as truth.

5.5.1.2 Lulworth Heritage Centre

Determination of popular understandings and knowledges of the formation of Lulworth Cove was approached in a similar way to that outlined above. The question "*do you know how Lulworth Cove formed?*" was asked of two sets of respondents, one group on their exit from the Lulworth Heritage Centre and another group at accommodation near the site. *Figure 5.xiii* represents the responses of individuals who had visited Lulworth Heritage Centre (n=60), located a short walk from the cove itself. Interpretation within the centre focuses primarily upon the area's geological and geographical interest, including processes involved in the formation of Lulworth Cove. The

processes are outlined in an extract from a booklet produced by the site's countryside rangers:

> Lulworth Cove is a natural harbour formed by the awesome power of a river and the sea. After the last Ice Age, a river swollen by meltwater flowed overland to the sea. The river cut a valley and breached the Portland Stone. The rising sea flooded into the valley and gouged out a cove. (Pfaff & Simcox, 1997:17)

Figure 5.xiv indicates the responses of informants who had not visited the Lulworth Heritage Centre (n=19). Respondents within this group were surveyed at The Shirley Hotel in West Lulworth and the nearby caravan park at Durdle Door. *Table 5.iv* provides a descriptive example of each category of response.

Category	**Response**
No attempt	No.
Wrong answer	"A bomb from the Second World War". (Lulworth Heritage Centre respondent)
One process named	Erosion.
Outline	"A combination of a river coming through and sea erosion". (Lulworth Heritage Centre respondent)
Description	"A breach of the sea into a river cut into hard Portland stone and erosion of the softer rocks inside". (Lulworth Heritage Centre respondent)

Table 5.iv: Examples per category of responses to the question, "do you know how Lulworth Cove formed?".

Comparison of the responses of informants who had / had not visited Lulworth Heritage Centre immediately reveals that individuals who had visited the centre were more likely both to attempt an explanation of Lulworth Cove formation and to relate correct information within that response. The higher proportion of correct responses compared to non-visitors and also compared to the data obtained from Chesil Beach may be a function of the level of geography / geology based interpretation displayed within the centre. Interpretation includes extensive but simple and attractive interpretation panels, coupled with audio-visual materials, IT and touch tables (see *Figure 5.xv*). However, one-quarter of respondents failed to give a correct explanation of processes of Lulworth Cove formation, despite having visited

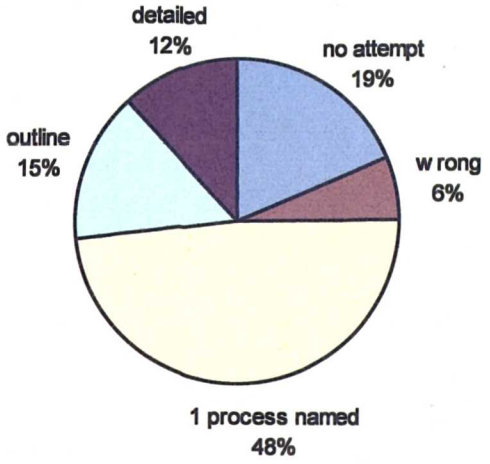


Figure 5.xiii: Understandings of Lulworth Cove formation amongst visitors to Lulworth Heritage Centre.

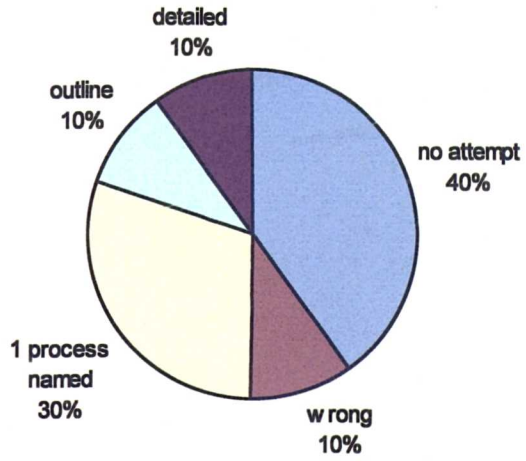


Figure 5.xiv: Understandings of Lulworth Cove formation amongst non-visiting publics.

Figure 5.xv: The geological 'touch table' and displays within Lulworth Heritage Centre.

the centre. The Lulworth Heritage Centre attracts over 500,000 tourists each year (Dorset Coast Forum, 1998*c*), many of whom may enter the centre as an aside to visiting the site and may spend only a short length of time studying the interpretation provided. Respondents were encountered who were visiting the site during a coach tour of the Dorset coast. They had been allocated thirty minutes in which to observe the site and thus had only a few minutes to spend within the interpretive environment of the heritage centre. Furthermore, individuals may visit the centre primarily because of a historical rather than geographical interest. The centre incorporates information relating to Lulworth Castle and the histories of the area's smuggling trade and shipwrecks.

Half of the individuals who had not visited Lulworth Heritage Centre failed to impart correct knowledges of processes of Lulworth Cove formation. However, inaccurate responses were considerably less apparent than within the Chesil Beach study. Lulworth Cove is a famous and widely cited landform example – especially within formal education – and the processes involved in its formation are simpler and more widely understood than those of Chesil Beach. These factors may contribute to the improved response, allowing the application of pre-existing geographical knowledges to the question. Nonetheless, inaccurate explanations often verged on the extreme. For example, it was suggested both that the cove formed as a result of a volcano and that it was due to a Second World War bomb. Such responses indicate the existence of further myths surrounding the origins of Lulworth Cove.

The majority of both heritage centre visitors and non-visitors imparted correct explanations of the formation of Lulworth Cove, although these predominantly constituted the naming of a single process. The frequency of such basic understandings may result from conditions of oversimplification within interpretation. A tourism booklet entitled *Thomas Hardy's Wessex* describes Lulworth Cove as "an almost perfect circle of limestone cliffs eroded by the sea into a natural harbour" (Chadwick, 1985). The description ignores a major agent in the formation process, the flooding of an Ice Age river delta, and fails to acknowledge that the cove's almost circular

morphology results from the differential erosion of rocks with variable resistance. Over one-third of individuals questioned about Lulworth Cove suggested that the feature formed through erosion alone. The likelihood that some, if any, of the respondents had read Chadwick's booklet is slim, but the frequency of the erosion response suggests that attributing the formation of Lulworth Cove to this process alone is a common misconception and may represent an over-simplification of geographical information within interpretation.

5.5.1.3 Charmouth Heritage Coast Centre

The Jurassic region of West Dorset, in particular the coastal resorts of Charmouth and Lyme Regis, forms the centre for fossil collecting in Dorset. Fossil collecting is a popular geographical pastime in the county, appealing to visiting and local publics alike. The Charmouth Heritage Coast Centre is located on the sea front at Charmouth and like the Lulworth Heritage Centre is primarily concerned with interpretation of the geographical and geological landscape. Interpretation within the centre is focused specifically upon the formation, collection and identification of fossils through popular and accessible media including CD-ROM, touch tables and the 'Jurassic Theatre', a small cinema in the basement which shows a film documenting processes of fossil formation (see *Figure 5.xvi*). Around 44,000 people visit the centre each year (Charmouth Heritage Coast Centre, 1999), primarily for its fossil interest and to attend guided walks led by the three permanent rangers based at the site. Processes of fossil formation are documented within the centre. Animal remains fall to the bottom of a sea or lake and are covered with layers of silt which petrify over millions of years due to applications of pressure. Minerals seep in to replace skeletal structures and eventually, geomorphological processes cause the fossil to emerge at the surface of the land. Individuals were approached both as they left the Charmouth Heritage Coast Centre and at accommodation within the West Dorset area. They were asked, "*do you know how fossils are formed?*" Responses from visitors to the Charmouth Heritage Coast Centre (n=51) are represented within *Figure 5.xvii*. *Figure 5.xviii* provides the responses for individuals who had not

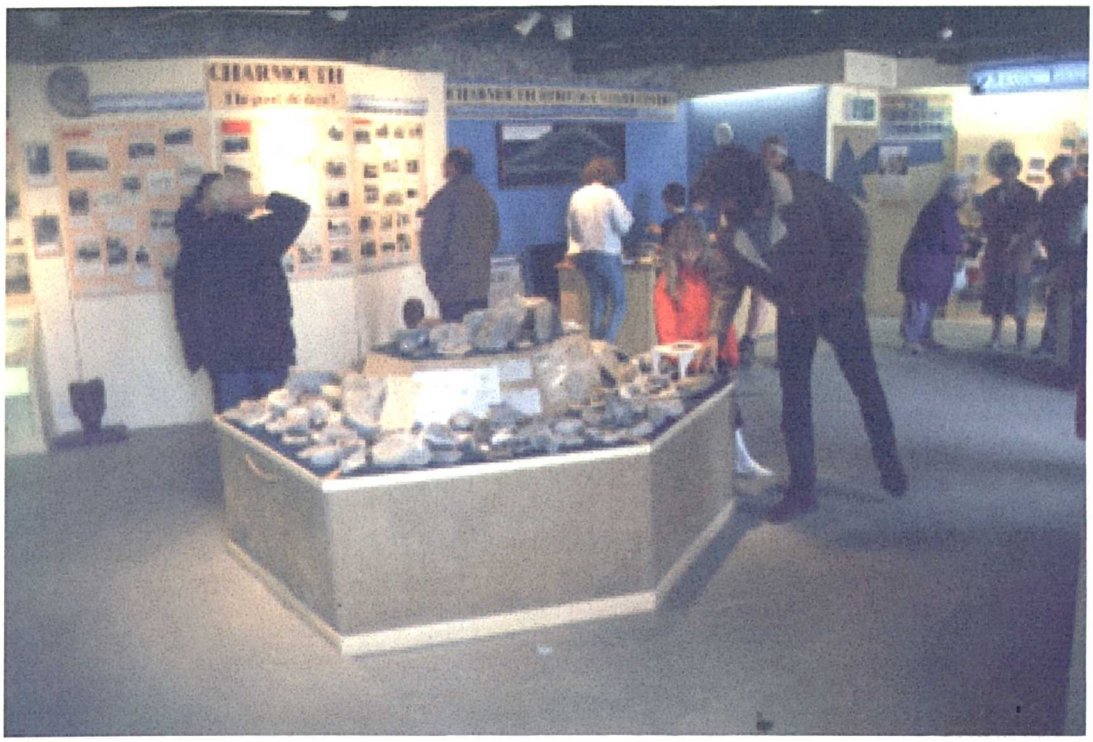


Figure 5.xvi: **Displays within Charmouth Heritage Coast Centre.**

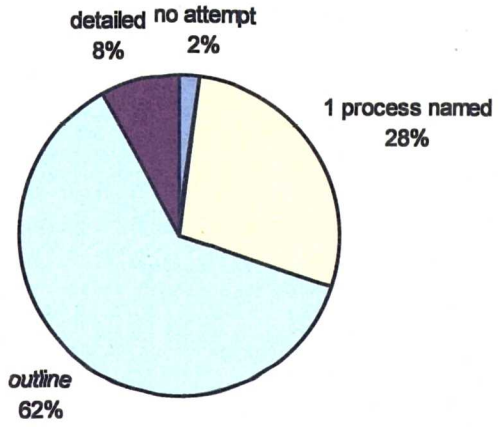


Figure 5.xvii: Understandings of fossil formation amongst visitors to Charmouth Heritage Coast Centre.

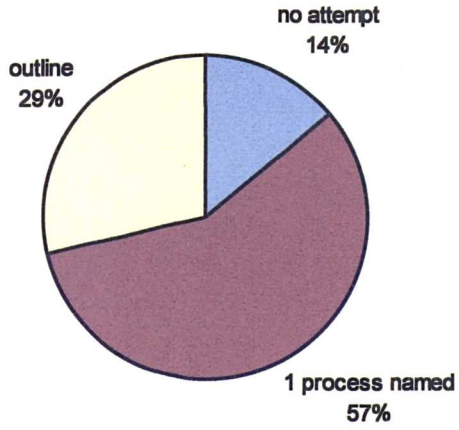


Figure 5.xviii: Understandings of fossil formation amongst non-visiting publics.

visited the centre (n=18), who in this case were approached at the Golden Cap Holiday Park in Seatown (a caravan park 7 km from Charmouth), and at two Bed & Breakfasts in the area. *Table 5.v* gives a descriptive example of categories of response.

Category	Response
No attempt	No.
Wrong	No wrong answers were given.
One process named	"Dead creatures trapped in sediment". (Charmouth Heritage Coast Centre respondent)
Outline	"Organic matter is buried under mud and turns to rock over millions of years". (Charmouth Heritage Coast Centre respondent)
Detailed	"Living creatures that died 180 million years ago and fell to the bottom of the sea. Their flesh was eaten by predators and the remaining shell or bone was compressed under layers of rock by pressure and age". (Charmouth Heritage Coast Centre respondent)

Table 5.vi: Examples per category of responses to the question, "do you know how fossils are formed?".

An immediately apparent disparity between the responses obtained at Charmouth and those from Chesil Beach and Lulworth Cove is that here, the majority of respondents attempted an explanation of fossil formation and amongst those who did, not a single wrong answer was given. The main difference between the knowledges of those who had / had not visited Charmouth Heritage Coast Centre thus arose from the detail of process descriptions. Two-thirds of visiting respondents showed greater understandings than the naming of a single process, compared to one-fifth of non-visitors, but knowledges were still considerably greater than those encountered at Chesil Beach or Lulworth Cove. The levels of understanding encountered at Charmouth suggest the existence of a greater awareness amongst publics of the basic processes of fossil formation than of key landscape features along the Dorset coast. The findings may be related to the widespread popular appeal of fossils, supported by the high attendance of fossil and dinosaur walks and events in the region.

5.5.2 Contextualising geographical knowledges

The effects of amalgamating data obtained from the three sites – Chesil Beach, Lulworth Cove and Charmouth – provide information relating to differences in geographical knowledges and understandings between heritage centre visitors and non-visitors. Furthermore, the regrouping of respondent subcategories to construct larger samples enables the generation of more meaningful results. *Figure 5.xix* depicts the responses of all visitors questioned at heritage centres (n=136) and *Figure 5.xx* the responses of individuals questioned at alternative sites (n=98). When amalgamated in this way, a clear distinction emerges between the geographical knowledges and understandings of respondents who had visited heritage centres and those who had not. 14% of heritage centre visitors made no attempt to explain the processes questioned, a considerable reduction on the 49% non-attempt of non-visitors and similar findings were evident within other categories. 71% of heritage centre visitors gave a correct simple or outline explanation of the processes, compared to only 31% of non-visitors. The findings suggest that Dorset's heritage centres may have a degree of success in contributing to the geographical knowledges of visiting publics.

Figures 5.xix and *5.xx*, however, indicate that only 9% of heritage centre visitors gave detailed explanations of geographical processes, an increase of just 5% compared to non-visitors. These findings suggest that heritage centres may interpret landscapes to only a basic level, or that visitors may attain only fundamental geographical knowledges from interactions with centre displays. The Chesil Beach Centre is primarily concerned with the interpretation of wildlife, a possible reason for the lack of correct response at this centre. The centre provides adequate geographical information, but in the form of an interpretation board which Carr (1989; see also Prentice, 1991) suggests is unpopular amongst publics. The interactive, relevant displays within the Lulworth Heritage Centre and Charmouth Heritage Coast Centre may have contributed to increases in correct responses amongst visitors. The decline in the proportions of 'no response' and 'incorrect' answer between non visitors and visitors, however, was

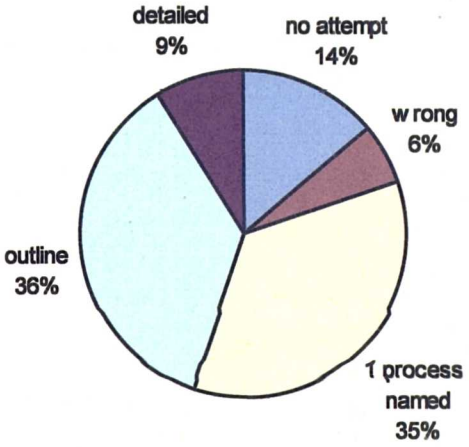


Figure 5.xix: Total geographical understandings amongst respondents visiting Dorset's coastal heritage centres.

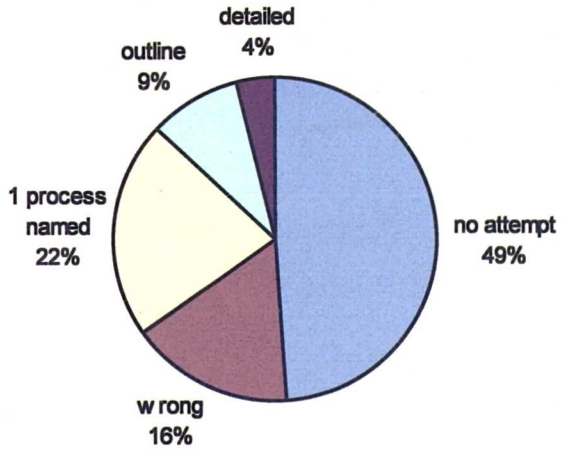


Figure 5.xx: Total geographical understandings amongst non-visiting respondents.

similar for both Chesil Beach and Lulworth Cove. This suggests the existence of further influences upon uptake of geographical knowledges amongst heritage centre visitors.

Despite the geographical relevance of displays and interpretation within heritage centres, visitors still lacked knowledges of how sites were formed. One-third of informants leaving the Chesil Beach Centre were unaware of processes of Chesil Beach formation. One-fifth of respondents visiting the Lulworth Heritage Centre were similarly unaware of how Lulworth Cove had formed, despite the centre's focus upon physical geography and geology. Although representations of geographical *information through* interpretation may be accurate and accessible to visitors, enhanced knowledges and understandings do not automatically follow (see Wagoner, 1989; Prentice, 1991; Ryan *et al.*, 2000). Two National Trust officers based in Purbeck highlighted this fact:

> R1: I mean what (.) what disappoints me is the number of people that go up into the castle, come out, and they won't have learnt a single thing (.) about the castle. They (.) think it's just fallen into ruin and they are unaware (.) totally unaware that it was blown up deliberately. And I (.) I find that sad in many ways. (National Trust Officer, Corfe Castle)
>
> R2: I presume the same could (.) be said of people looking at Lulworth (..) come away thinking it was an atomic bomb or something. (National Trust Education Officer, Purbeck)

Interpretation is not merely a function of the presentation and representation of information, it also relates to the interactions and knowledge formations of visitor publics. This raises questions concerning the determination of those influences which encourage publics to participate in geographical learnings and knowledge formations.

A potential influence upon informal learning and geographical knowledge retentions amongst popular audiences is the levels of prior education attained. During a study of the museums and art galleries of France, Bourdieu & Darbel (1991:14; see also Light, 1995; Lee, 1998) found

that "museum visiting increases very strongly with increasing level of education". The research determined that 55% of museum visitors held a *baccalauréat* level qualification, equivalent to the A-level in England and Wales. If Bourdieu & Darbel's findings were to correspond to visitation in the heritage centres of Dorset they might have significant implications for the study, suggesting that expression of geographical knowledges and understandings amongst visiting publics may be related to prior levels of formal geographical education rather than to informal learnings within heritage centres (see McManus, 1993).

However, comparison of the formal geographical educational attainments of respondents who had / had not visited heritage centres located along the Dorset coast reveals that here, pedagogic influences upon visitation are not as pronounced as within Bourdieu & Darbel's art museums. 84% of respondents (n=234) stated that they had studied geography at some stage during their education, but for only 17% did this extend beyond the equivalent of Key Stage 3 into non-compulsory geographical learning. 7% of total respondents had achieved an O-level or GCSE in geography, 6% an A-level and 3% a degree. Educational attainments were comparable between heritage centre visitors and non-visitors up to GCSE or O-level, but no A-level or degree-level geography qualifications were encountered outside heritage centres. The findings initially suggest that this element of Bourdieu & Darbel's research may be supported to some extent within the visitation of Dorset's heritage centres, but further examination of the actual figures involved indicates that 6% of respondents with A-level geography qualifications constitutes just fourteen individuals, and seven individuals (3%) with geography degrees.

Despite the low figures involved, steps were taken to assess whether formal educational attainment had any influence upon the geographical knowledges and understandings of respondents. Effects may relate to the possession of specific geographical understandings of the sites in question, or to the creation of cognitive connections between new and existing geographical knowledges, enhancing processes of learning (Light, 1995;

Ballantyne, 1998; Lee, 1998). Individuals possessing higher geographical qualifications emerged as more likely to express correct explanations of processes of Dorset landscape formation, but their responses typically incorporated a single process or outline description. Within the detailed response category, responses were evenly distributed throughout levels of formal educational attainment.

Data, especially from Charmouth, appear to suggest that those individuals who visit Dorset for reasons explicitly linked to a geographical or geological interest may often possess enhanced knowledges of landforms despite not always having attained advanced levels of formal geographical qualification. Stebbins (1992:10; see also Stebbins, 1996) notes that an individual may undertake "a specialized pursuit beyond one's occupation, a pursuit that one finds particularly interesting and enjoyable", with specialist interest resulting in information seeking and enhanced learning within the bounds of the subject. Light (1995:138) adds that "people who visited because of a declared interest in historic sites showed more interest and attention to interpretive media". It may thus be possible that the detailed geographical knowledges possessed by some heritage centre visitors are related to their specialist interest in the subject.

Evidence collected within this study suggests that heritage centres may achieve a degree of success in enhancing popular understandings and knowledges of geographical landscape and landform processes. Data also indicate that respondents with specialist, geography-related interests may possess, or be able to retain, extensive geographical knowledges and understandings. The findings suggest that the role of the heritage centre may be twofold. First, to maximise interests in geography amongst visiting publics and enhance recognitions of the contribution of geography to popular experience. Second, to attempt to relate geographical interpretations to visitors' pre-existing cognitive structures in the form of relevance to popular interests and experiences (Hooper-Greenhill, 1987; Fitzgerald & Webb, 1994; Macdonald, 1995; Lee, 1998; Bennett, 1999).

5.6 Conclusion

Early sections of the chapter revealed that Dorset's coastal landscape is frequently valued as a predominantly aesthetic concept amongst visiting publics. MacCannell (1989) suggests that the social construction of landscape enables sites to be 'framed' in a certain way, influencing perceptions. In Dorset, cultural, literary and media representations alongside personal notions of a nostalgic or romantic landscape image may create an aesthetic framing, generating preconditioned perceptions of the coastal landscape (see Grusin, 1998; Hopkins, 1998). Geographical and pedagogical constructs may seldom be valued amongst visiting publics.

Altering the framework through which popular audiences may observe and experience the Dorset coast may enhance the extent to which publics recognise and value geographical contributions to their encounters of landscape. Geography and geology related heritage centres along the Dorset coast appeal to public audiences through forging links between the coastal landscape and popular interests, for example fossil collecting, dinosaur prehistory and what is locally referred to as the 'gasp factor' of the geomorphological processes involved in the creation of coastal features:

> The way Stair Hole is so tightly folded like that (.) it's fantastic! (.) You can think of the (.) earth movements that created the forces that were required to generate that kind of thing. (Male respondent, 40 -55, Corfe Castle)

Latter sections of the chapter suggested that Dorset's heritage centres might have the potential to enhance the geographical knowledges possessed by visiting publics. However, it emerged that the importance of the heritage centres perhaps relates more to their role in increasing geographical interests and in constructing recognitions and values of geography within popular experience.

To determine whether Dorset's heritage centres may successfully enhance geographical interests amongst visiting publics, it was first

necessary to explore differences in landscape value attributions between heritage centre visitors and non visitors. Findings suggested that respondents who had not visited a heritage centre attributed greater value to coastal features such as the *beaches* and *sea*. Individuals also tended to express textual representations relating to the 'atmosphere' of the coastal environment, highlighting its *relaxing*, *peaceful* and *fun* attributes. Both value categorisations are concurrent with the search for more traditional 'holiday' experiences and were coupled with a disproportionately low valuing of geographic or pedagogic landscape attributes. In contrast, respondents who had visited a coastal heritage centre were more likely to employ descriptive textualisations in value expression. Words such as *rugged*, *varied* and *clean* were utilised to give details of the specific and personal reasons for landscape value.

The findings suggest that respondents who did / did not visit Dorset's heritage centres may have been seeking different values from their holiday experiences. Individuals who had not visited centres often gave reasons such as a lack of time, preference for other activities and the deterrent of an entry fee (although entry to all heritage centres is free of charge) for their lack of visit. In contrast, it was perhaps the dramatic and physical aspects of the landscape encountered during holiday or activity experience and highlighted by the use of descriptive representations that spurred individuals to seek additional information relating to the geographical formation of landscape features within heritage centres.

Visits to coastal heritage centres appeared to enhance respondents' geographical values and interests. Of those individuals who had not visited a centre, one-third stated that they were not interested in finding out about the Dorset's geographical landscape, half were uncertain, and only one-sixth expressed a definite interest. Of those who had visited a centre, the proportion of respondents stating that they had no interest in Dorset's geography remained the same. However, only one-sixth were uncertain, with half of individuals possessing an interest in the geographical landscape. Links between visitation and interest cannot be assumed by these findings,

but the indication is that heritage centre displays may encourage individuals with a limited interest in geography and landscape to pursue this interest further. If this is the case, the main issue surrounding geographical interpretation on the Dorset coast relates to the encouragement of further visitation to heritage centres (see Prentice, 1991), requiring the employment of mechanisms of geographical popularisation.

Dorset County Council's *Jurassic Coast Project* works on the basis that the popularisation of geography and geology may be achieved through the construction of linkages between academic aspects of the subject and related popular interests, including in particular the potentials of dinosaur and fossil linkage. Contextualisation of interpretation is widely supported (see for example Lewis, 1987; Dierking, 1998; Lee, 1998). However, the diversity of coastal value attributions expressed by visiting publics suggests that finding a geographical interpretative medium which achieves the objective of appealing to a range of popular interests and values is a difficult task. Furthermore, the difficulty of achieving a communication balance between interpretation providers – both academics and professionals – and public audiences constructs further obstacles to the popularisation of geography.

Chapter 6

Worlds Apart? Gaps Within Geography

Chapter 6: Worlds apart? Gaps within geography

6.1 Introduction

A key theme to emerge from the study of formal, informal and popular geographical learnings at the Dorset coast relates to the existence of 'gaps' or disparities between three major geographical audiences: school groups, higher education and publics. Recognition of the existence of gaps between different branches of geographical encounter is not entirely unfamiliar (see for example Unwin, 1987, 1992; Goudie, 1993; Keene, 1993; Crang, 1996; Rawling, 1996*a*; Shaw & Matthews, 1998). However, previous research has tended to focus upon either the gap between school and higher education geographies or the gap between academic and popular geographies, without assessing the implications for geography as a whole.

Within this thesis, chapter 4 highlighted pedagogical and thematic differences between the geography taught on school and higher education fieldtrips. Chapter 5 revealed that geographical encounters of the Dorset coast are often disregarded by visiting publics. These issues have implications for the integration and continuity of geography throughout popular, school and higher education domains, and suggest that geography should be considered in its entirety rather than as a set of discreet educational entities. This chapter highlights the importance of integration and continuity in geography through exploration of the disparities between school, academic and popular geographies which have become apparent during ethnographic study. Comparison with a more extreme case of dissociation existing within the geology discipline adds further weight to suggestions of future difficulties within geography. The chapter ends with the construction and presentation of a possible approach towards the integration of geographical learning.

6.2 Gaps within geography

An assessment of the disparities existing within geography first requires the differentiation and definition of the three branches of geographical learning relevant to this study: school, academic and popular. School geography incorporates compulsory education – which in the UK extends between the ages of 5 and 16 (Years 1 to 11) – and optional but increasingly widespread education for 16 to 18 year olds (Years 12 and 13). During Years 1 to 9, students in England and Wales are educated according to terms specified within the National Curriculum (DfEE, 2000). Geography has been classified as a separate and compulsory entity within the National Curriculum since 1988, disregarding the two years between 1998 and 2000 when the Labour government instructed primary schools to focus upon standards of literacy and numeracy at the expense of other subjects (Rawling, 1999; Slater, 1999). Students thus encounter a fixed proportion of classroom time dedicated to the formal learning of geography.

Beyond Year 9, geographical education is no longer compulsory but is widely offered as an option for GCSE and A-level examination within schools. Kent (1999) suggests that geography constitutes the sixth most popular GCSE subject and fourth most popular A-level subject amongst students in the UK. However, there is some evidence that the number of students opting for geography at secondary level is declining. Bradford (pers. comm.) notes that the number of candidates for GCSE geography fell by 8.5% and 3.5% in 1998 and 1999 respectively, with a 6.0 % decline in the number of A-level candidates in 1999. In the light of such decline, the relevance of geographical learning within schools to both higher education geography (see Unwin, 1992; Daugherty & Rawling, 1996; Rawling, 1996*a*) and the 'real' geography encountered beyond the realms of formal education (see Mossa, 1995; Bale, 1996; Davidson & Mottershead, 1996; Marsden, 1997) has been questioned. Such questioning is the subject of further investigation within this chapter.

Academic geography constitutes the development of formal geographical knowledges within higher education institutions, incorporating the learnings of students post-18. Within the higher education system, significant changes during the early 1990s were responsible for the removal of the binary divide and the promotion of institutions formerly termed 'polytechnics' to university status. Higher education in England and Wales was thus placed on an even keel. Throughout higher education institutions, formal geographical undertakings generally follow a similar format, constituting three years of lectures, practical laboratory work and fieldwork (Jenkins & Healey, 1995; Davidson & Mottershead, 1996). Increasingly, students may pursue a four-year course which includes a yearlong industrial placement. Kent (1999) notes that each year 16,000 students study geography in England and Wales within 98 higher education institutions. However, there is some evidence that students' uptake of geography – especially physical geography – degree courses is declining. UCAS (2001) has reported that despite an increase of 1.5% in the total number of students entering higher education between 1999 and 2000, applications from students to study physical (BSc) geography fell by 6.8%. Human (BA) geography applications rose by just 0.8%.

Academic geography also includes the research undertaken by postgraduates and staff within higher education institutions. In 1999 approximately 1,000 postgraduates undertook research in geography. Geographical research has undergone increasing specialisation since the 1960s (Stoddart, 1986; Daugherty & Rawling, 1996). Although beneficial in terms of geographical advancement, this has created problems for the continuity of geographical learning between school and higher education.

The formal geographical encounters of school and higher education domains may be differentiated from the informal geographical learnings of individuals through popular experience. Throughout this thesis, popular geography has been defined as "that geography which is produced and used beyond the academy and other official knowledge institutions" (Crang, 1996:631). It may be considered to incorporate those activities carried out by

publics during leisure time, which are of an inherently geographical nature (see Stebbins, 1992, 1996). Within Dorset, popular activities may have an intrinsically educational purpose, including the pursuit of an amateur interest, participation in lifelong learning and the contemplation of interpretative resources provided by heritage centres and museums (see Urry, 1991). Alternatively, fossil collections, site visitations and aesthetic landscape appreciations may be undertaken purely for purposes of entertainment and enjoyment. Research conducted within chapter 5 suggested that visiting publics in Dorset often lacked specifically geographical interests in the coastline. This finding perhaps results from the poor image of geography – alongside other science-based subjects – held amongst many publics (Gregory & Miller, 1998*a*).

Study of the gaps within geography has been divided into two subsections. The first explores the disparities between formal school and higher education geographical learnings / knowledges. The second subsection considers the gaps between formal academic and informal popular geographical learnings / knowledges. Following consideration of the two divides as separate entities, the implications for geography as a whole are assessed.

6.2.1 The school versus the academy

Disparities between school and higher education geographies are well documented (see for example Naish *et al.*, 1987; Unwin, 1992; Goudie, 1993; Bradford, 1996; Rawling, 1996*a*,*b*). The divide between these two branches of formal geographical encounter is considered to have emerged since the 1950s and 1960s, a period of considerable innovation and specialisation within the academic geography tradition (Daugherty & Rawling, 1996). The cost and time expenditures involved in keeping school curricula in line with academic developments created a situation in which many key and progressive subject areas in academia were absent from school geographical learning (Lambert, 1994). Humanistic geography, popular culture, gender

studies and landscape geography (Daugherty & Rawling, 1996; Rawling, 1996*a*) are all prominent within academic research, yet absent from school curricula. In addition, Birnie (1999; see also Bradford, 1996; Unwin, 1996) documents the emergence of considerable variability in geographical pedagogy between school and higher education teachings.

The gap between school and higher education geographies has arguably widened over recent years. "The school education and higher education sectors have tended to diverge as schoolteachers and geography educators have focused increasingly on issues relating to learning, teaching and curriculum reform while higher education geographers have been more interested in substantive geographical research" (Bednarz *et al.*, 2000:78). In schools, teachers may be constrained by the pressures of OFSTED inspections, ever increasing volumes of administrative work and by the limiting nature of the National Curriculum:

> In this day and age teachers (.) are (.) supposed to be following the curriculum. (...) They don't have time to explore the other options. (Jurassic Coast Project Officer, Dorset County Council)

Within academic fields, the introduction of the Research Assessment Exercise (RAE) and Teaching Quality Assessment (TQA) in 1988 and 1992 respectively (Gardner, 2000) has placed significant pressure upon higher education institutions to improve departmental performance (Healey, 1997). Academic geographers must therefore concentrate on their teaching responsibilities and research publications in order to satisfy governmental demands. The time and resource pressures placed upon both schoolteachers and academic staff limit the opportunities for the creation of explicit links and sequential progressions between school and higher education geographies, for example through the joint publishing of textbooks or the exchange of ideas and findings.

Further complicating an already divisive situation, Shaw & Matthews (1998:369) document the emergence of an element of conflict between

academic and school geographers. They write, "efforts to make work visible and accessible by for example publishing press articles or works of scholarly synthesis (e.g. textbooks) are sometimes regarded pejoratively by peers". Shkedi (1998:573; see also Bruner, 1985; Gudmondsdottir, 1991, 1996) suggests that in their original format, academic research findings are of little use to teachers due to the specialist technicality and language that they may often employ. "Teachers' knowledge is narrative, while research is perceived by the teachers as scientific-paradigmatic". Textbooks written by academics for school use were considered important in the translation and exchange of new geographical ideas during the 1970s and 1980s (Davey *et al.*, 1995; see also Johnston, 1992). The failure to maintain this link may make a further contribution to the widening academic – school divide.

Within this study, evidence of the gaps between school and higher education geographies was encountered in terms of the subject content of geographical learnings, which was often found to be fundamentally different between the two branches of formal geographical learning. Furthermore, the frameworks of geographical pedagogy through which teaching was approached were frequently different within school and higher education groups. The variability of subject content and pedagogy may be explored through examples obtained from the fieldwork observations and encounters within this study.

6.2.1.1 Subject content

In section 4.3.1 of chapter 4, concerns surrounding the compartmentalised nature of the geography contained within school curricula and secondary examination syllabuses were raised (see Mossa, 1995; Marsden, 1997; Palmer, 1998). It was acknowledged that the compartmentalisation and separation of geographical processes into individual entities is seldom reflected within the field. Students may thus be confronted in the field with a physical reality that fails to match the pedagogic representations of geography encountered within the classroom. Within the field, schoolteachers demonstrated a tendency to simplify complex processes

and sites in the hope that this may assist students' understandings of geographical concepts. However, simplification frequently contributed to increasing confusion. Sand dune development was reduced to the single process of longshore drift by one primary school group, and a secondary teacher evaded explaining the complexities of Chesil Beach formation by instructing students to examine interpretative displays within the heritage centre. Teachers' attempts to simplify or compartmentalise sites may represent a desire to fit reality to the individual processes and concepts named within curricula or syllabuses. Simplification of reality may run the risk of providing students with inadequate information for progressive geographical learnings or for continuation into higher education.

Adding further to problems of simplification and subsequent disconnection within school geography, many syllabuses have experienced a recent refocus of subject content. The introduction and subsequent popularity during the 1980s and 1990s of enquiry-based GCSE and A-level syllabuses, most notably ULEAC's *16-19* syllabus (recently renamed the Edexcel Geography 'B' syllabus) (Edexcel, 2000) has placed a real emphasis upon management issues within school geography (see Naish *et al.*, 1987; Hall, 1996; Birnie, 1999; Chalkley *et al.*, 2000). Enquiry approaches to geographical fieldwork were frequently encountered within Dorset. The GCSE group from Hertfordshire, for example, completed work for the *Threatened Landscapes in the UK* module of the NEAB syllabus. Using the Isle of Purbeck as a case study, the group investigated the impact and management of tourism based upon the coastal landscape. The Essex GCSE group was following the OCR *Avery Hill* syllabus (OCR, 2000) and completed environmental appraisals and honey-pot site surveys for a tourism management study.

Enquiry-based approaches to geographical learning are aimed at equipping students for life beyond higher education geography, providing opportunities for the development of vocational, management and career-building skills (Naish & Rawling, 1990; Unwin, 1996; Birnie, 1999; Kent, 1999). However, alongside the compartmentalised nature of school curricula,

enquiry-based geography has been criticised for its failure to represent 'real' geography, that geography encountered within the field and researched within academia (see for example Marsden, 1997). Daugherty & Rawling (1996; see also Unwin, 1996) have questioned the implications of enquiry-based learning for students who do wish to pursue geographical study within higher education. They suggest that these students may be unprepared for the specialism of the geography encountered within academia.

In contrast to the simplified and often management based nature of school fieldwork, the higher education groups encountered at the Dorset coast frequently undertook specialised studies of complex geographical processes and comprehensive examinations of structures and landforms. A group of final year geography undergraduates from the University of Durham conducted a detailed study of the geomorphological composition of Black Ven, a coastal mudslip located between Charmouth and Lyme Regis. In the field, students employed techniques such as levelling and geomorphological mapping to evaluate the landform, digging pits and collecting samples for subsequent analysis in the laboratory. The completion of fieldwork occupied the majority of the weeklong trip, which incorporated intensive follow-up work during the evenings. A similarly specialist and extensive study of the geology of Dorset's coastal landscape was conducted by a group of undergraduate geology students from a higher education college in Essex. The group's itinerary included the study of carbon rich Kimmeridge Clay beds at Kimmeridge Bay and Triassic desert deposits and Cretaceous beds at Charmouth. Complex techniques of stratigraphy, fossil identification and geological mapping were employed during the fieldtrip. The complexity of fieldwork undertaken by higher education groups contrasted with the frequently simplified nature of school geography.

The examples of geographical encounter and knowledge development observed during school and academic fieldtrips in Dorset appear to strengthen suggestions that the curriculum-induced simplification of school learning and the continuing and increasing specialisation of academic research combine to create widening geographical disparities (Daugherty &

Rawling, 1996; Bednarz *et al.*, 2000). The highly specialist knowledges imparted by members of staff within higher education teaching may contrast with the lack of specific geographical expertise possessed by secondary teachers, who are frequently required to teach entire geography syllabuses at GCSE and A-level stages (see Rawling, 1996*a*). The discontinuity which has developed between the subject contents of school and higher education geographies is thus a result of both the different directions / foci of study and the degrees of complexity involved. However, variability exists not only in terms of geographical subject content. Birnie (1999; see also Bradford, 1996; Unwin, 1996) suggests that differences also emerge from the pedagogical approaches to geographical teaching adopted within schools and higher education.

6.2.1.2 Pedagogy

Teaching methods employed within the school and higher education fieldtrips encountered at the Dorset coast were highly variable. Several school fieldtrips relied heavily upon the one-way dissemination of knowledge between teacher and students, referred to by Fuller *et al.* (2000) as a 'staff-centred' approach to geographical learning. The A-level group from Devon, for example, practised no field techniques during their trip. The teacher preferred to communicate geographical knowledges about sites encountered verbally. Where active approaches to fieldwork were adopted by schools, practical work was closely supervised and students were offered support and guidance at all times. The A-level group from Kent had an introductory session with their teachers at each site to ensure that they were fully aware of how to proceed with fieldwork exercises. During data collection, students received further knowledge contributions from the teachers as they moved between the groups. In contrast, higher education fieldtrips frequently involved students working independently on projects. The students from Durham were presented with a research brief and had to decide which techniques and approaches to employ in order to achieve the required results. Higher education groups generally spent extensive periods of time in the field, and supervisory support was reduced to sessions in the evenings.

Fuller *et al.* (2000) suggests that fieldwork approaches such as those adopted by higher education groups incorporate a greater degree of 'student-centred' learning.

Subjects and styles of teaching adopted within the field are often representative of those employed in other areas of formal geographical education. Although it can be argued that differing pedagogical frameworks are suitable for students at progressive stages of cognitive development and natural maturation, Goudie (1993; see also Bradford, 1996; Crang, 1996; Unwin, 1996) highlights that disparities between the teachings of schools and higher education often create the belief amongst academics that undergraduates lack substantial geographical knowledges upon entrance into higher education. He calls for teachers to recognise the demands and expectations placed upon students in higher education and to seek information about new trends in academic research, in order to ease the continuation between school and higher education:

> For their part schools need to find out what universities seek and desire from school children, they need intellectual stimulation of those engaged in producing exciting research, and they need early access to new ideas, themes and techniques that can filter through to schools and add a new dimension to teaching. (1993:339)

In terms of teaching methodologies, however, it may be argued that it is in fact schools which operate at the 'cutting edge' of new developments (see for example Chalkley *et al.*, 2000). Within higher education, students are encouraged to work independently throughout much of their three-year degree courses, with supervisory contact reduced to impersonal lectures, seminars and the occasional tutorial. In contrast, schoolteachers are constantly on hand to provide students with information and encouragement. The school is additionally an environment in which interactions between teachers and students are actively sought (Hooper-Greenhill, 1987). The shift from school to higher education pedagogies may constitute a significant transformation for students. Davidson & Mottershead (1996:317; see also

Bradford, 1996; Shaw & Matthews, 1998; Birnie, 1999) have highlighted the problems a stark transition may create for new undergraduates:

> Students coming through from schools and colleges over the next few years may be expected to be well versed in enquiry methods and decision-making, as a consequence of more student-centred styles of teaching through primary and secondary education. ... Higher education staffing levels and resource provision may not facilitate the interactive approaches which such students will expect.

Gaps between school and higher education geographies are thus evident within frameworks of both subject content and pedagogy. School – academic disparities have been investigated and researched by geographical authors, with findings substantiated through fieldwork observations at the Dorset coast. Less widely studied, however, is the disparity between formal encounters of geography within academic fields, and popular geographies experienced by non-specialist publics. As established within chapter 5, popular geographical encounters may or may not incorporate informal geographical learnings.

6.2.2 Academics versus publics

Shaw & Matthews (1998:367; see also Lowenthal, 1961) suggest that geography is a subject which holds a degree of relevance and interest in the lives of variable public audiences:

> There is a strong sense in which everybody knows what geography is about. After all, it is studied in school compulsorily to the age of fourteen, and both the increasing incidence of overseas travel and the prevalence of maps and place descriptions in media reporting give geography an apparently uncomplicated role as a descriptive support to the understanding of everyday life.

The explorer Michael Palin (1991:1) adds strength to Shaw & Matthew's perspective, writing, "geography is one of those richly comprehensive subjects whose relevance is all around us. Where we come from, what we

do, what we eat, how we move about and how we shape our future are all directly the province of the geographer. More than ever we need the geographer's skills and foresight to help us learn about our planet – how we use it and how we abuse it". Shaw & Matthews add that themes which are recognised as inherently geographical amongst publics may be very different to those studied and researched within higher education. "If penetrating, insightful and prospectively useful geographical work is produced within academia, why does it often have little in common with what passes for people's perceptions of the subject outside of university departments?" (1998:368). Academic geography has diverged from its popular roots of the eighteenth and nineteenth centuries (Barber, 1980) and the difficulty of (re)connecting popular and academic encounters of the subject arises from the gulf which has opened between these two very different fields.

In section 5.4.2 of chapter 5, publics visiting Dorset were asked to textualise their personal perceptions and values of the coastal landscape resource. Of 134 different words chosen, the five most popular were *beautiful*, *scenery*, *scenic*, *coastline* and *clean*. Each of the five words was chosen by over 15% of respondents (n=211), *beautiful* being the most frequently selected (25% of respondents). The words all appear to relate to the physical and aesthetic features of the coastal landscape. However, when asked to describe the geomorphological processes which resulted in the formation of the coastline's key features, only 7% of respondents (n=234) demonstrated full and accurate geographical knowledges. Prentice (1991; see also Wagoner, 1989) notes that tourists often seek leisure rather than educational experiences whilst on holiday, despite recognition that entertainment and education may possess a complementarity within popular encounter (Urry, 1991; Stebbins, 1992, 1996). The findings support the suggestion that visitors to Dorset may be immersed in the collection of place, gazing upon sites of aesthetic and cumulative value rather than collecting information for educational purposes. "The average tourist is a collector of places, and his [sic] appetite increases as his collection grows" (Waters 1967:59; see also, Urry, 1990; Johnson, 1996).

A fairly extensive literature exists on the practice and culture of collecting. Merriman (1991:123) suggests that "the active acquisition of objects specifically to add to a collection is a widespread phenomenon in Britain, being practised by around a third of the population". Reasons for partaking in collection are numerous, but learning rarely constitutes a key motivational factor. Merriman notes that primary reasons for collection pertain to perceived relevances to the collector's family and to the aesthetic appreciation of objects. Only in third place is there any acknowledgement of the educational value of the objects collected through links to history or the past (see also Pearce, 1992, 1998; Bal, 1994). In Dorset, site visitation was frequently related to nostalgic family-based reminiscence. An 85-year-old female respondent, for example, stated that Lulworth Cove was her favourite part of the Dorset coast because, "I was conceived there in August 1913" (see also Burgess *et al.*, 1988). Merriman's findings may be linked to the realisation that despite the evident popularity of 'place' collection – and also the inherently geographical fossil collection – in Dorset, opportunities for informal learnings of geography are not automatically recognised by visiting publics.

To highlight the differences between popular and academic encounters of geography, academics from the geography departments of varying higher education institutions were asked to textualise their perceptions and representations of the Dorset coastline using three descriptive words. The most popular words selected by academic respondents were *landslides*, *geology*, *coastline*, *dynamic* and *exposures.* The contrast between these words and those selected by publics – *beautiful*, *scenery*, *scenic*, *coastline* and *clean* – is clear. Popular perceptions of the Dorset coast frequently descriptive, aesthetic and sometimes nostalgic or romanticised. Expressions may be based upon experiences and encounters rather than detailed geographical knowledges (see Burgess *et al.*, 1988; Penning-Rowsell & Burgess, 1997). In contrast, academic responses indicate specialist knowledges, employ technical language and portray a detachment from the physical experience and encounter of landscape.

Contrasts between popular and academic expressions of geography may be recognised within the literature produced for touristic encounter. Many, frequently retired, academic geographers have contributed literary materials for non-specialist publics regarding the geography and landscape of the Dorset coast. The materials might be considered to make some contribution to the bridging of the gap between academic and popular geographies. However, not only do the materials frequently contain complex, specialised information aimed at individuals who are in possession of prior geographical knowledges (see Bray, 1981), but they may also fail to acknowledge popular aspects of geography. Research within chapter 5 suggested that popular geographical interests focus largely upon the aesthetic appreciation of Dorset's coastal landscape. In contrast, chapter 4 documented that academic and school geographies are largely reliant upon the study and analysis of processes. The process focus of academic writing is further supported within the following extract, taken from a tourist guide to Dorset's Geology written by a retired academic:

> Although Palaeozoic rocks are known in boreholes at depth beneath southern Dorset, only Mesozoic and Tertiary rocks are exposed along the coast. The Triassic crops out on the coast of east Devon where it is unconformably overlain by the Upper Cretaceous, and its boundary with the lowest Jurassic is seen in Pinhay Bay just west of Lyme Regis. The famous and fossiliferous Liassic sections of the Lower Jurassic are best seen along the coast between Lyme Regis and Bridport. (Michael House, *Geology of the Dorset Coast*, 1989:1)

There may thus be a considerable gap between the geographies constructed by academic geographers, even those aimed at popular audiences, and the values and perceptions of geography possessed amongst publics.

The academic practice of employing highly specialised and technical geographical language (sometimes referred to as 'jargon') within literature may result in the exclusion of non-specialist audiences. Porritt (2000*b*:8; see also Billinge, 1983; Blomley, 1994; Shaw & Matthews, 1998) suggests that the increasing specialism of science and the development of very narrow

spheres of expertise in research may create conditions of elitism and exclusiveness. "As scientific complexity deepens, we see even narrower specialisms proliferate. Even people who qualify in the same field can no longer keep up with colleagues working elsewhere around the same subject". Bray (1981:221) adds, "more and more, today's professionals are writing to impress each other rather than to inform the general public". Frustration with the specialist content and language of academic writings was evident amongst Dorset respondents:

> A lot of it is jargon (..) that [scientists] don't *want* the ordinary person to understand. (..) They are always a little bit precious about it (..) and that is where you get this great gap. (Female respondent, 40 - 55, Corfe Castle focus group)

> There's nothing worse than having suddenly having someone throw a whole load of jargon at you and you feel *really thick*! You know (.) you just think oh, this is so over my head. And it does (.) it just completely switches you off (..) and you just (..) you just don't go back again, do you? (North Dorset countryside ranger, Sturminster Newton)

At the opposite extreme, geography and landscape may be mentioned within general tourism brochures and guides, but geographical information provision is frequently brief and incomplete. In section 5.5.1.1 of chapter 5, for example, the *Freshwater Beach Holiday Guide* was found to contain inadequate and misleading information regarding the formation of Chesil Beach. A number of tourists thus acquired the belief that Chesil Beach formed overnight through the action of a large storm. The apparent dichotomy between basic and highly technical geographical interpretations – both marketed for non-specialists – may prove problematic for the progressive learning of geography amongst popular audiences:

> When you talk about what materials people can buy (..) when you go to these centres, and it ranges from *tack* to the scientific (..) and trying to find a middle ground I find, from someone who *is* (.) pretty much middle ground in terms of what they're going to buy, is (.) it's very rare to find that middle ground in literature. (Male respondent, 25 - 40, Dorchester I focus group)

The gap between the geographies studied in academia and those encountered during popular experience may be responsible for a perceived lack of interest in the subject amongst publics, as highlighted within chapter 5 (see also Shaw & Matthews, 1998). Links between popular encounter and geographical learning are seldom made explicit within literature and individuals may be deterred by the highly specialist nature of academic geography research. Unwin (1987; see also Crang, 1996; Shaw & Matthews, 1998) suggests that the failure to connect popular and academic geographies may have negative implications for the funding of academic research and university education. It may also hinder conservation of landscape resources due to a lack of awareness amongst publics (Edmonds, 1998*a*).

Inadequate connection between popular and academic geographies may have an effect upon the uptake of the subject within formal education. School geography may be considered to vary from the geographical interests that students may possess outside the classroom, within the popular geography domain. In chapter 5, it was established that children in particular may often have a specific interest in fossils and dinosaurs. However, explicit links between these popular interests and formal geographical knowledges are absent from the National Curriculum. In addition, disparity between the subject content of school and higher education geographies has implications for the popularity and uptake of the subject at degree course level. There is a lack of firm evidence to suggest that disconnections between different branches of formal and informal geographical encounter are inherently responsible for the arguably declining status of the subject. However, an assessment of a similar disunity within the geology discipline provides a degree of substantiation.

6.3 The geology discipline: where has it gone wrong?

The gaps that ethnographic study has established exist between formal, informal and popular geographical encounters are reflected within other science-based disciplines. The lack of adequate communications

between scientists and publics is well documented (see Gregory & Miller, 1998*a*,*b*; Porritt, 2000*a*). For example, Bray (1981:221) highlights the problems faced by the archaeology discipline:

> There are two kinds of archaeology: archaeology as perceived by archaeologists, and archaeology as perceived by the man [sic] on the street. ... There is a wide gap – let is call it the comprehension gap – between what archaeologists think they are doing (and repeatedly tell each other they are doing) and what most people believe the archaeologist actually does. The existence of this gap, and public misapprehension of what archaeology is all about, is a matter of serious concern.

This section introduces the specific example of geology, a subject in which a breakdown in communications between elements of formal and informal education and encounter has raised serious questions concerning the sustainability of the discipline. The example provides the opportunity for comparisons to be drawn with geography, enabling assessment of geography and its implications for the future development of formal and informal knowledges.

The status of geology within education is arguably declining (Hawley, 1996). This is highlighted by figures which suggest that between 1992 and 1999 alone, annual candidature for geology declined by 59.5% at GCSE level and by 31.5% at A-level (Geological Society, 2000). In 1987, the newly introduced National Curriculum incorporated geology within the 'Science' element of school teaching (Walford, 1996). Initially, geology formed 10% of the scientific learning of students aged between 5 and 16 years, constituting a relatively small proportion of total teaching (Hawley, 1996). With each subsequent re-edition of the curriculum – most notably in 1991 and 1995 – the proportion was reduced still further.

The most recent National Curriculum, introduced in early 2000, features geological education at all stages of the science curriculum from Key Stages 1 to 4. However, geology forms only a small part of the *Materials and their Properties* section, a subset of the science programme (DfEE, 2000;

see also Geological Society, 2000). In addition, only one examination board nationally, the Welsh Joint Education Committee, offers geology as a GCSE option. The subject has a declining annual candidature. In 2000, only 1,181 students sat the examination (WJEC, pers. comm.). Candidate numbers at A-level are similarly low. In 1999, only 1,995 students studied A-level geology throughout England, Wales and Northern Ireland (Geological Society, 2000), compared to an equivalent 37,055 candidates for geography (DfEE, 1999). The low profile of geological education was reflected within chapter 5. Whereas 84% (n=234) of the visiting publics encountered in Dorset had studied geography to some level within school education, only 17% had studied geology – predominantly respondents aged over 40 years.

It is within schools that students are often considered to be most open to the development of interests in a subject (see Binns, 1994; Catling, 1999*b*). Furthermore, geology has been recognised as an important subject within schools due to its potential to contribute to students' general education. Evans (1973) claims that at primary level geology may assist in the development of descriptive, comparative, classification and labelling skills. Harwood (1987:59) adds that exercises in rock identification can help pupils to develop "a broad range of skills in science", including "detailed observation and analysis", "application of key concepts and principles" and "formulation and assessment of hypotheses". However, the low status of geology within school education creates considerable obstacles to the encouragement of student interests and the rigidity of the National Curriculum means that teachers are seldom able to construct stimulating and widely applicable geological learning experiences.

The location of geology within the science programme of the National Curriculum places a particular emphasis upon the direction of study, reinforcing the subject's perception as complex and predominantly scientific. Geology does include the scientific elements of mineralogy and petrology, but there may be numerous other facets to geological learning. Porritt (2000*a*; see also Gregory & Miller, 1998*a*,*b*) suggests that within schools, the dynamism and relevance of science is often subsumed by the constraints of

curriculum-based learning. The scientific classification of geology at school level may thus discourage students from pursuing the subject at secondary school level.

The pedagogic provisions of geology within schools create further obstacles to the subject's endorsement amongst students. The inclusion of geology within the science programme of the curriculum implies that it may be taught predominantly by science teachers. Few science teachers may possess specialist knowledges of geology because of the poor provisions for geological learning within their own education. Indeed, they may frequently have "studied very little more geology than they themselves took in a geography [or science] course" (Baird, 1968:224). The reliance upon technical terminology and identification procedures within geology may intimidate non-specialist teachers, who thus teach only the bare requirements of the subject as stated within the science curriculum (Hawley, 1996).

The poor provisions for formal geological learning within early education may contribute to the low recruitment of students for GCSE and A-level study. Yet with few examination boards offering geology at these levels it may be difficult for individuals who do possess geological interests to pursue the subject. The decline in candidate numbers may thus be reinforced. Higher education establishments often prefer that students embarking on geology degree courses have not studied the subject at A-level. Students with chemistry, physics and mathematics A-levels may be shown entry preference to degree courses. The further decline in demand feeds back into schools. Without provisions for the study of geology at secondary school level, a lack of awareness and interest amongst students will ensure that demand for degree courses remains low. Only 50% of UK universities currently offer undergraduate degree courses in geology (The Geological Society, 2000) and in 1997, only 1,335 students graduated with a geology degree from a UK higher education institution (Ward, 1999) as compared with the estimated 16,000 students studying geography each year (Kent, 1999). Formal geological education provisions within schools and higher education are arguably experiencing self-reinforcing cycles of decline

due to the negative effects of diminishing student interests and recruitments in the subject. A former secondary geology teacher from East Dorset highlighted some of the problems faced by school and higher education geology teaching (see also Ward, 1999):

> R: I mean I think the interesting thing about A-level geology is that (.) one of the reasons I'm sure that (.) it's declined so much is simply because you don't need A-level geology in order to read it at University. In fact you're positively *discouraged* from doing it simply because you need chemistry, maths and physics more than you need geology.
> I: Yes, that's true.
> R: I mean my experience of teaching A-level geology is that, you know, you set something in train that you've really got to (.) *rein in* (.) because (..) you get youngsters come to you who've got no experience of it (.) and they get so hooked on it (..) that (.) you know, at the end of year one you find that the whole group wants to do geology at university (.) say now hang on a minute (.) um have you thought what you're going to do at the end of this, because professional geologists (.) you know (..) er unless you're prepared to go and work in South Africa or Australia, there are just no jobs in this country at all.

The extract highlights that geology's lack of popularity within higher education may be further affected by the relatively poor prospects for geologically related employment in the UK. Oil and gas, geological consultancy, civil engineering and construction constitute the major geological employers in the UK, yet Ward (1999) reports that only 10.6% of 1997 geology graduates secured jobs within these spheres.

Stoddart (1986) argues that the decline in geology as an academic discipline commenced during the late nineteenth century, when the establishment of geography as a university subject created competition between the two disciplines over the place of landscape and landform studies. Geography ultimately won the contest, gaining possession of one of the more popularly relevant aspects to geological study. Baird (1968) suggests that a further downturn in the subject's fortunes occurred during the late 1960s, when geological teaching in schools and higher education began

to diminish. Declines in the status of geology as a discipline are thought to be at least partially linked to the failure of popular audiences to recognise the importance and relevance of the subject. "Public perception of the geological sciences as central to a balanced education is undoubtedly underdeveloped" (Geological Society *et al.*, 1994:254). Geology may be perceived as uninteresting and inanimate, despite its contribution to understandings of systems on Earth and centrality to many aspects of human life and development. Clarke (1991:218) suggests that "geology is seen as an academic subject rather than one that could be attractive in leisure time". Publics "are not at the moment aware of the impact and relevance of geology to their daily lives". Clarke's views were reiterated by Dorset respondents:

> Very few people (..) look at geology as being a (.) fundamental element of everything. (National Trust Officer, Corfe Castle)

> I don't think the publicity about [geology] does it any favours! [laughs] (...) I must admit I (.) I find it quite an interesting subject, about rocks and crystals and all that jazz (..) and (..) yet you don't really want to tell people because the look on their faces when you say, oh isn't that an interesting rock! [laughs] (..) Especially when I don't actually have (.) any qualifications or (.) much knowledge about it. (..) It's not like I know what I'm talking about really! (Female respondent, 25 - 40, Dorchester II focus group)

> With a lot of geology you have like chemical (.) names and chemical (.) compounds in them. And I think a lot of people (.) just (.) you know *that's* when people shut off. It's like the (..) the *science* of geology (..) they don't like but they do like the kind of fossil hunting, looking at landscapes. (Male respondent, 25 - 40, Dorchester II focus group)

Public audiences may possess negative opinions not only of the subject content of geology, but also of the individuals who partake in geological study. Academic geologists are often considered somewhat eccentric, middle-aged men, invariably with ample facial hair and geological hammers (compare Long & Steinke, 1996; Porritt, 2000*a*). Such typecasting is not limited to popular audiences; academics may similarly place stereotypes upon publics, regarding 'the public' as a homogeneous group of

people with similar levels of knowledge and understanding in areas of academic study. Indeed 'the public' are frequently perceived as possessing very little knowledge of science-based subjects, including geology (see for example Holloway, 1999; Irwin *et al.*, 1999).

Academics may consider their geological knowledges and experiences to be superior to those of publics, although in reality 'the public' constitutes an extremely heterogeneous group of individuals with diverse and highly variable knowledges, interests and experiences which are of equal validity to those of academics. Perceptions of academic superiority may create a situation whereby geology is considered an elitist and inherently academic subject (see for example Bray, 1981; MacCannell, 1973, 1989; Fowler, 1992). A retired academic geologist encountered during research was adamant that geology was a subject which should only be undertaken by middle-class, preferably male individuals possessing an expressed interest in geological study. He suggested that there is no place for popular involvement in informal geological learning based upon non-specialist activities or interests. An extract of dialogue from the focus group that he attended, held in Bridport, reveals the extent of his views on the subject:

> R1: The other argument is that (.) there is this great big peak for the six weeks of the summer season (..) and outside the shoulder months (..) everything is struggling to survive. (Jurassic Coast Project Officer, Dorset County Council)
> R2: Yes now *that's* when you want the individual who is interested in it (.) *not* to be (..) *surely* not to be (..) you know (.) sort of (.) feathered with (.) low-grade tourism. (.) If he [sic] can come down and find the place more or less empty so he can get on with his own interests. (.) That's what you destroy if you (.) flog (.) tourism to the wrong people. (Retired academic geologist, 65+)
> R3: When you talk about low-grade tourism what do you mean? (male respondent, 55 - 65)
> R2: Well I mean the general public who are going to flock down to West Bay to watch you know (.) this Heartbreak House (..) what's it called?
> R3: Harbour Lights.
> R2: And if someone feeds *them* a lot of information about the (.) lovely geology they'll say what's this lovely geology? We must go and get a bit of the action.

R3: But that (.) particular (.) line will bring a lot of people here and a lot of money. (...) But whether (.) whether or not it's good for business, when (..) when you say they're low-grade I mean you're degradating some of the people of Great Britain.
R2: I'm what, sorry?
R3: Well you're degradating what they are (..) I mean they're not low-grade tourists.
R2: I'm talking about people (..) who (.) who approach something as very serious as geology (.) which is a major science (.) for the *wrong reasons*, that's all. People who approach geology should do it because they are very (.) very into it.

The views of the academic geologist represent a central theme of problems faced by geology, and to a lesser extent also geography: a disjunction and lack of integration / communication between variable formal, informal and popular branches of geological learning. School and higher education geologies are currently experiencing decline via positive feedback mechanisms which have negative consequences for student enrolment. Images of geology amongst publics are not assisted by poor geological provisions within formal education, or by attitudes towards popular involvement held by some academics. The self-reinforcing cycles of decline prominent within geology may be considered to a lesser extent evident also within geography. Integration of separate branches of formal and informal geographical learning must be investigated in order to avoid the emergence of a disunity similar to that which has developed within geology.

6.4 Approaches towards geographical integration

The example of the geology discipline highlights the importance of educational integration – both between and within formal and informal domains – to prevent the deterioration of provisions for learning. Bradford (pers. comm.) already notes elements of decline within secondary school geography and Rawling (1996*a*) suggests the existence of a 'growing discontinuity' between school and academic geography which may place the whole future of geography discipline at risk if it is allowed to continue

unresolved. Bednarz *et al.* (2000) document an attempt to (re)establish communicative and co-operative links between school and higher education geographies through the development of the International Network for Learning & Teaching Geography (INLT), a body which constructs a framework for the interchange of dialogue between different sectors of the geography discipline. However, broader provisions for publics and popular encounters within geography are still overlooked within this approach.

The inclusion of popular experiences and interests within appraisals of geography is significant not only in terms of formal learning and educational progression. Tilden (1977) suggests that increasing public awarenesses and interests may also have positive implications for environmental attitude developments and landscape conservation. The strength of the relationship between awareness / understandings and positive environmental attitudes is the source of much uncertainty (see for example Ballantyne, 1998; Uzzell, 1998*a*; COPUS, 2000; Seke, 2000), but within Dorset approaches to landscape conservation acknowledge the importance of encouraging participation amongst publics and developing popular geographical and geological knowledges (Dorset Coast Forum 1998*a*,*c*; 1999; Edmonds, 1998*a*,*b*,*c*). The establishment of popular interests in geography and the integration of both formal and informal geographical learning opportunities is thus important in terms of the encouragement of a progressive and relevant geographical education, and in terms of promoting the conservation of the geographical landscape.

6.4.1 Models of popular involvement

Traditionally, models of popular involvements in academic – especially science – subjects were based upon the notion that 'the public' exists as a homogenous group of people who lack knowledges of science and who automatically and unconditionally accept information provided by experts as 'truth' (see Boorstin, 1964; Ballantyne, 1998). Levels of public understanding were measured against scientific standards to determine levels of knowledge

'deficit' (Gross & Levitt, 1994; Hartman, 1997; Blais, 1999) and information was disseminated via a one-way flow from scientists to publics (Knorr-Cetina, 1981; Hartman, 1997). Norton (1996:359; see also Culler, 1981) suggests that such models of information dissemination perceived publics as "passive, gullible sponges".

Sources of criticism for the deficit model of information dissemination arise from the lack of opportunity it presents for feedback between publics and scientists or for any form of interaction. The Royal Society's Committee for the Public Understanding of Science (COPUS) has been criticised for adopting a one-way approach to public involvements in science (Fitzgerald & Webb, 1994; McKechnie, 1996; Michael, 1996), evident within literature produced by COPUS. An extract reads:

> If discussion is structured carefully enough, it is sometimes possible for lay subjects to develop what most scientists would regard as a reasonable view of an issue. (COPUS, 2000:3)

Porritt (2000*b*:8; see also Gregory & Miller, 1998*a*) suggests that "for COPUS, 'public understanding' means understanding above all that the public is ignorant and therefore prey to a host of suspicious influences filling its head with unscientific and emotional rubbish. What matters is filling that same head with scientifically authoritative material to set it on the straight and narrow". Indeed, the deficit approach to the public understanding of science has achieved limited success, evident through the lack of public interests in academic writings, the negative view that many individuals hold of academics and the low levels of geographical understanding expressed by publics within chapter 5.

It was Tilden (1977) who expressed an early recognition that scientific interpretation should not constitute a one-way transmission of information but instead, should "provoke an emotional response as well as making a personal connection with the visitor" (Markwell & Weiler, 1998:107). Tilden's proposed approach to scientific interpretation requires the active participation

and interaction of audiences, constituting "mutual interchange and negotiation rather than education per se" (Blatti, 1987:6; see also Uzzell, 1984, 1998*a*; Bale, 1996; Crang, 1996). In recent years, progress has been made towards recognition that 'the public' is not a homogeneous group, nor are individuals totally without geographical knowledge. Publics may encounter geography frequently within their everyday lives (Lowenthal, 1961; Shaw & Matthews, 1998) and popular experiences of geography form valuable contributions to the subject.

Shifts towards the adoption of interactional and participatory approaches to popular involvement in science, coupled with recognition of the validity of popular values and encounters of geography (Penning-Rowsell & Burgess, 1997; Grayson, 1998), coincide with calls for "greater communication between geographers at all levels within the discipline" (Unwin, 1987:169). Porritt (2000*a*:110; see also Gregory & Miller, 1998*a*) suggests that "scientists have to understand people if they want people to understand science", highlighting the key theme of interaction within moves towards the (re)connection of the geography discipline. Interaction forms the basis of an approach towards the (re)connection of school, academic and popular aspects of geographical learning, documented within the remainder of this chapter.

6.4.2 Circuits of geographical interaction

In his seminal paper on the development of cultural studies, *The story so far and further transformations?*, Johnson (1986) documents the development of a 'circuits of culture' model (see *Figure 2.v*), representing circuits of the production, circulation and consumption of cultural objects. Based upon Marxist models of capital circulation, Johnson's circuit diagrammatically represents productions of cultural texts, their readings and translations by publics and the feedback effects of public readings upon future cultural products. Johnson refers to stages in the circulation between official publication and public readings as 'moments'. Each moment is subject

to transformations through the effects of different 'conditions', for example the asymmetries of power, cultural resources, knowledge and social factors such as class, gender, race and age:

> Public forms range across the whole social surface, though they are differently attended to, understood and used by different social groups. (Johnson, 1986:287)

Johnson's 'circuits of culture' model has been subsequently adapted by several authors and re-applied under variable cultural conditions. Burgess (1990), for example, adopts the model within her paper, *The production and consumption of environmental meanings in the mass media: a research agenda for the 1990s*. Here, she employs the model to represent public consumptions of environmental issues in the media. Burgess suggests that contemporary media texts feed on and represent communications, and audiences consuming media texts interact with them to create individual discourses:

> My central proposition is that the media industry is participating in a complex, cultural process through which environmental meanings are produced and consumed. ... Media communications may be theorised as a circuit of cultural forms through which meanings are encoded by specialist groups of production and decoded in many different ways by the groups who constitute the audiences for those products. (Burgess, 1990:139-40)

Johnson's circuit has similarly been adapted by Squire (1994; see also Squire, 1992) to represent the interrelations between tourism, culture and society which develop through the productions and consumptions of literary tourism:

> The model highlights the myriad of producers, consumers, and meanings underlying interpretations of a cultural form like tourism. In the process, it also helps to enrich understanding of tourism as a social construct with important links to other cultural values. (Squire, 1994:117)

Norton (1996:356) has utilised Johnson's circuit as a "framework within which to investigate the roles of tourism marketing and the experiences of tourists

in the development of popular understandings of nature and culture". Individuals may construct variable readings, translations and meaning attributions from tourism encounters. Norton suggests that, "the study of tourism demonstrates that the circuit of culture does not involve a simple transfer of a discourse from a 'producer' to a 'consumer'. Indeed, the conceptual distinction between production and consumption is deconstructed through the consideration of tourism as an arena for discourse construction and manipulation" (1998:370).

There is considerable scope for use of Johnson's circuits of culture to represent the circulation of information and communications between academic, school and popular forms of geographical encounter. Utilising a feedback mechanism, the circuit represents exchanges between academics, schools and distinctly heterogeneous publics. To adequately represent the complex interactions between the three audiences, including the inextricable processes of production and consumption (Crang, 1997) and the influence of intermediary groups including amateur specialists, lifelong learning projects and student teachers, some considerable adaptation of the circuit diagram is required.

Figure 6.i represents an adaptation of Johnson's model, incorporating three interacting circuits (academic, school and popular) and symbolising their progression towards the achievement of geographical integration. The superimposing of the three circuits demonstrates the flows and interactions of knowledges and experiences within the individual sectors as well as their relation to other circuits. Encounters within variable geographical domains are diverse but interchangeable, with a permeability of ideas and influences between different fields. Communications and interactions are not easily portrayed in diagrammatic form, but their representation is attempted through the overlapping nature of the three circuits. The popular circuit relates primarily to non-specialist public audiences and their individual experiences of geography. The school circuit relates to formal educational encounter within schools. The academic circuit relates to the production and consumption of geographical knowledges within higher education / research.

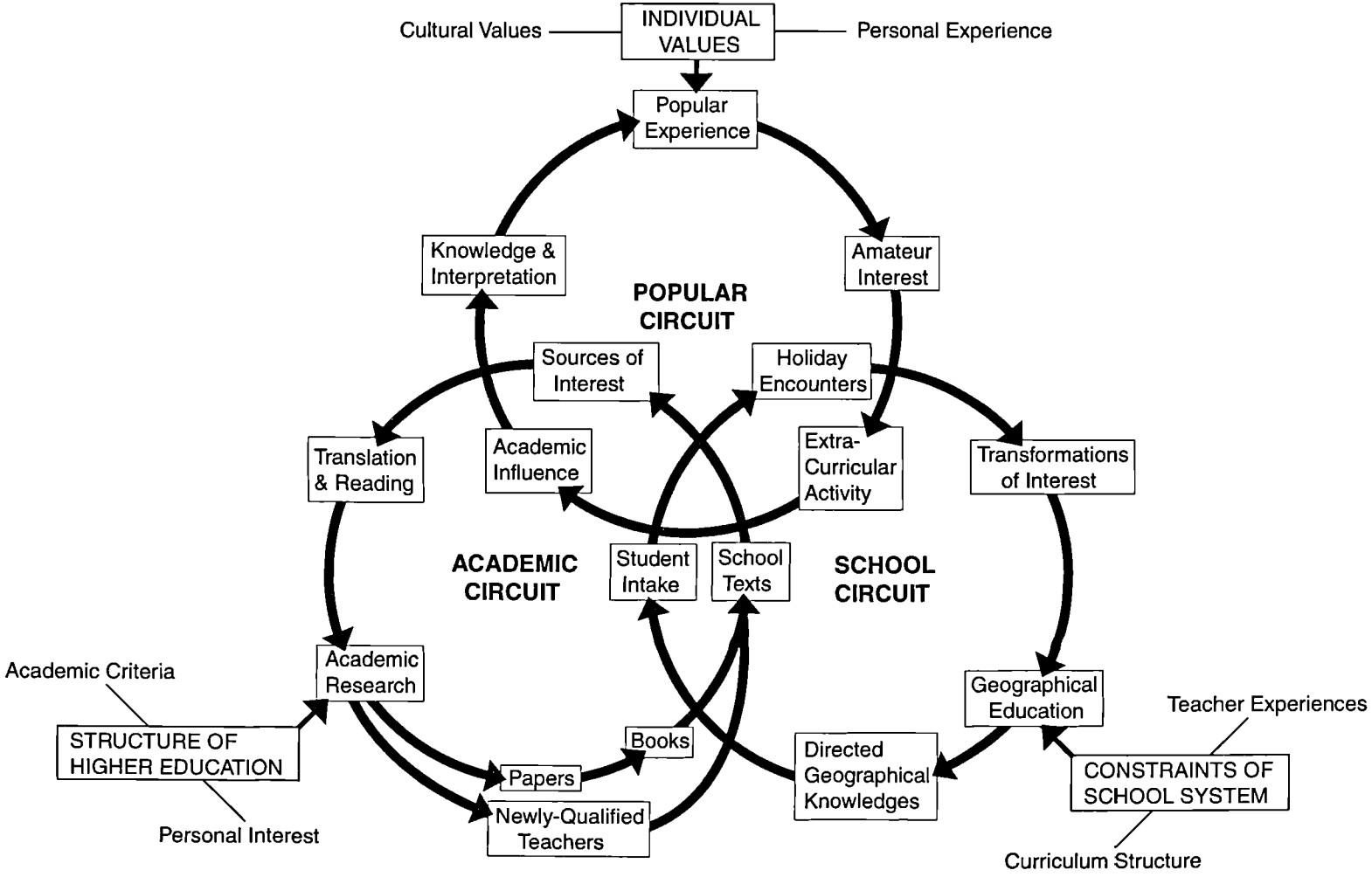


Figure 6.i: Diagrammatic representation of circuits of geographical integration.

6.4.2.1 The popular circuit

Experiences and encounters of popular geography may be influenced by the personal perceptions of the individual. Perceptions are transformed by the cultural contexts in which individuals live, and such conditions may be universally generated (Boyer, 1994; Cosgrove *et al.*, 1996; Matless, 1999), for example the perception of a typical English cultural landscape suggested by Goodey (1986). Alternatively, perceptions may be influenced by individual experiences (Stevenson, 1993; Endersby, 1997), including factors of age, gender and race (Blaut, 1980; Avery, 1988) alongside encounters of place (Lowenthal, 1978; Squire, 1988). Stebbins (1992, 1996) suggests that popular experiences and encounters may result in amateur interests amongst individuals. Such 'serious leisure' may create an invaluable interconnection between informal and formal learnings of geography, enabling exchanges of knowledges and the development of popular interests.

The importance of popular (and amateur) encounters within geography as a whole is represented by the influence that cultural and individual experiences and perceptions may have upon developments of knowledges, understandings and learnings of geography (see Stebbins, 1992, 1996). For children in particular, encounters with geography through popular activities may influence developments of subject interests and encourage the pursuit of geography throughout formal school education. Equally, popular geographical encounters may influence students' decisions to study the subject within higher education (see Haggett, 1996). Through the example of archaeology (but equally applicable to geography), McManamon (1994:76) suggests that academics should become more aware of the popular elements to their subjects, because "archaeologists in academic institutions must rely on the general public's interest in archaeology to fill their course offerings so that their departments remain strong or continue to grow". Experiences and interests developed within school and higher education – particularly the influence of geographical fieldwork – may similarly encourage students to pursue popular interests and activities outside formal education (Foskett, 1997).

Overcoming pre-existing obstacles to the development of an integrational and interactional relationship between academic and popular geographies is a key target for the circuit. The technical and specialist language adopted within academic texts constitutes a significant barrier to the translation and popularisation of research. Simpson-Housley (1988:270) suggests that the inclusion of geographical descriptions and the acknowledgement of popular values within literary writings may constitute a key approach to the (re)connection of popular and academic geographies. "Novelists' imagery is evident in the total structure of their works and in their local descriptions. Such an understanding emphasises that landscapes have emotional significance that is not revealed in 'objective' scientific geography". The extracts that follow represent images of Dorset's coastal landscapes that have been incorporated within the writings of contemporary literary authors. The authors include recognition of popular (aesthetic) values of the landscape within their description of the same resource that is subject to specialist scrutiny within academic texts:

> I picked up a mercifully level footpath and followed it for two miles through woods and fields along the crest of a hanging valley to rejoin the coast path at a lonely eminence called Houns-tout Cliff. The view once again was stunning: whaleback hills and radiant white cliffs, dotted with small coves and hidden beaches washed by a blue and infinite sea. I could see all the way to Lulworth, my destination for the day, some 10 miles and many daunting whalebacks to the west. (Bill Bryson, *Notes from a Small Island*, 1995:120)

> On the south coast of England at Lyme Regis in Dorset, the cliffs tower over the surrounding landscape. The town hugs the coast under the lee of a hill that protects it from the south-westerly wind. To the west, the harbour is sheltered by the Cobb, a long, curling sea wall stretching out into the English Channel – the waves breaking ceaselessly along its perimeter. To the east, the boundary of the local graveyard clings to the disintegrating Church Cliffs, with lichen-covered gravestones jutting out to the sky at awkward angles. Beyond this runs the dark, forbidding crag face of Black Ven, damp from sea spray. The landscape then levels off across extensive sweeps of country, to where the cliffs dip to Charmouth, before rising sharply again to form the great heights of Golden Cap. (Deborah Cadbury, *The Dinosaur Hunters*, 2000:3)

6.4.2.2 The school circuit

Geographical education within schools takes the form of both concrete (curricular) learning, in which information and knowledges passed from teacher to student are universal to the whole class, and the experiences and encounters of the individual. As well as constructing the framework for formal geographical learnings, schools are also responsible for influxes of students into undergraduate degree courses (Rawling, 1996*a*). Effective geographical learning at school may thus encourage the development of geographical interests amongst students and influence their decisions to pursue the subject within higher education.

Effective geographical learning within schools may be at least partially dependent upon the pedagogic skills of the teacher. Teachers vary substantially in terms of their abilities to teach geography (Unwin, 1987), a fact highlighted by tutors at Dorset's field studies centres:

> Like anything in life some teachers (..) um (..) know their stuff (..) and (..) get children properly tuned in (.) unfortunately like any walks of life (..) they sometimes don't and you've got the (..) you have to undo some of the teaching and the kids (..) children get confused. (Tutor, 3-D Educational Adventure)

> If [teaching] is not done in a particularly lively way it can turn off a lot of (..) um (..) young children from geology and geography before they even get a chance to (..) enjoy it. (Tutor, the Allnatt Centres)

Sanders (1995) suggests that the individual experiences and pedagogical approaches of teachers may benefit and enthuse students, but the detailed structure of the National Curriculum restricts the extent to which teachers can be flexible within their teaching. At primary school level, teachers are frequently required to teach the entire curriculum. They may thus lack the geographical specialism to expand upon the basic frameworks for learning provided within the National Curriculum (Rawling, 1996*a*; see also HMI, 1989; Binns, 1996). Within secondary school, geography teachers generally possess specialist knowledges but may be required to teach the entire

geography syllabus, restricting the depth to which specific geographical topics and themes are explored. Students may thus be unprepared for the specialist nature of higher education study.

Effective geographical teaching within schools may have a positive influence upon popular interests. Members of the Dorset tourism industry expressed the view that students visiting the coastline during school fieldtrips often returned at a later date for holidays and visits:

> The spin-off being (..) that you then hopefully (.) although it's a long term spin off you get a second generation of interest (..) so if we (.) in other words if we bring schoolchildren down here (..) what the area has to offer them (.) in terms of (.) educational interest amongst other things (.) then you might find you bring them back when they're (.) when they're grown up with children of their own. (Hotel owner, Weymouth Hoteliers Association)

Similarly, the forging of connections between informal and formal learning encounters may feed back into students' enjoyments and uptakes of geography within school and higher education.

6.4.2.3 The academic circuit

Conditions affecting the conception of ideas and the production of research within academia are twofold. Academic criteria and the specific research interests of the department may be influenced by the individual experiences of the academic researcher both within academia and within their personal encounters (see Blomley, 1994). Progressive research may be produced within academia but it is seldom made available to other (non-academic) geographical audiences. Questions relating to the lack of integration and communication between academics and publics have already been raised in section 6.4.2.1, but there may also be little flow of information and knowledges between higher education and schools. Some uncertainty surrounds approaches towards the correction of this situation.

Goudie (1993) suggests that it is the role of the teacher to take an interest in geographical developments occurring within higher education. However, Unwin (1987) calls for academic geographers to develop an awareness of changes within school geography and to translate the findings within specialist research papers into books for school audiences. Responsibilities for the establishment of a "continuous thread of geographical education" (Rawling, 1996*a*:320) between different branches of formal geographical learning most likely lie with the co-operation and interaction of both parties. Integration between school and higher education geographies might be achieved through the influence of Newly Qualified Teachers (NQTs), who may provide the important link between developments in academic research and the school classroom. Bednarz *et al.* (2000:281; see also Bradford, 1996) write, "geographers working in teacher education are in a unique position to understand school and higher education issues ... the flow of good geography graduates into teacher education and, subsequently, of well-trained teachers into schools, is crucial to the continuing health of geography at all levels".

In his paper, *The social helix: visitor interpretation as a tool for social development*, Machin (1989) introduces the concept of a 'social helix'. Machin's model demonstrates the progressive nature of interpretation in steering people through the four stages of discovery, understanding, decision-making and action towards social improvement or attitude change, being "formulated to demonstrate the relationships between how people gain their understanding of their world and what they can do to improve it" (1989:150). Machin's dynamic model of the development and advancement of a process may be adapted to represent progress towards the integration or co-operation of academic, school and popular geographies. The inclusion of a spiral element within the circuit adds the influence of time to the circuit, representing the dynamic and protracted nature of the process. To indicate that progression towards the integration of geography is approached simultaneously by the three domains involving feedback and interaction, a spiral element would emanate from each of the three circuits.

6.5 Conclusion

Kent (1999:289) has produced a summary of issues discussed at geographical education seminars during 1997 and 1998. The Royal Geographical Society (RGS), Institute of British Geographers (IBG), Geographical Association (GA), Council for British Geographers (COBRIG) and the Qualifications and Curriculum Authority (QCA) were all involved in the seminars, which incorporated discussion on the future of geographical education. Kent notes that a central topic of discussion amongst the groups was "a concern that school geography neither reflects the lives of students nor the geography taught in universities". Such a realisation has also formed a key theme within this thesis. The outcome of the seminars was to set a series of challenges for the future. The challenges included the improvement of geography's image amongst publics, the establishment of enhanced communication between different geographical domains and an endeavour to keep pace with advances and developments in the professional world.

The circuits of geographical integration introduced in *Figure 6.i* represent an approach towards the (re)connection and integration of geography as a discipline in accordance with the challenges listed above and as an attempt to eschew the problems faced by the geology discipline. Valuable progress may be made within the discipline through improving the image of geography amongst popular audiences. Of primary importance is an academic acknowledgement of the value of popular geographical aspects to the subject and the creation of links between the two geographical domains. Establishing communications through the coupling of academic fact with popular imagery within literature (Simpson-Housley, 1988) and interpretative heritage centres may improve the accessibility of academic research without threatening the specialism and integrity of geography within higher education.

It has been widely suggested and cited within chapter 4 that the early stages of education may be important in the promotion of subject interests amongst students (see for example Binns, 1994; Catling, 1999*b*). The role of

the school is thus significant within the geography discipline. Increasing linkages between children's popular out-of-school interests, for example dinosaurs and fossil hunting, and academic aspects of geography may increase the popularity and interest of the subject. The employment of geography and geology related films or documentaries – such as *Jurassic Park* and *Walking With Dinosaurs* – to establish links with formal education has been suggested as a mechanism by which to contextualise children's popular interests:

> Throughout the whole of the country *Jurassic Park* has been a tremendous (..) interest in the life of children (.) because it's been followed out of the school. (Jurassic Coast Project Officer, Dorset County Council)

Linking popular and school / academic geographies may help to stem recent declines in the numbers of students opting to study geography within secondary school and higher education.

An alternative mechanism of increasing the profiles of geography at all levels is through the establishment of lifelong learning and amateur interest initiatives. Within Dorset, opportunity to pursue amateur interest in geography or geology is provided through such organisations as the Dorset Geologists' Association (DGA) and the Dorset Natural History and Archaeology Society (DNHAS). Both organisations have a substantial membership base but meetings and fieldtrips are predominantly attended by those of retirement age. The age structure of the organisations may be due to the lack of time available for younger individuals to pursue such activities (Stebbins, 1996). The existence of a more widespread amateur interest in geography was indicated by the fact that several hundred individuals attended a series of public lectures on the history of the Earth organised by the DNHAS during spring 1999.

Individuals involved in amateur interest – and particularly lifelong learning – may often have followed the interpretative route suggested by Machin (1989; see also Stebbins, 1992, 1996). Having discovered and

understood the subject of their interest, they may decide to take action to further their knowledge. Section 6.2.2 revealed that interpretation is frequently geared at either a basic or very specialist level of understanding, which is not conducive to progressive geographical learning:

> People (.) sort of go on about kids (.) and geology and fossils and dinosaurs and (..) they tend to try and (..) they tend to just naturally channel things down that way because that's the way it's been promoted. (..) um (.) when you see people in displays and you *do* see the older people reading what it says there, trying to see if the general message can work in their head or not (.) you do see that (..) virtually anybody (...) would be interested. (Geology Advisor, Dorset County Museum Service)

> I think (..) I think there's just an (.) appalling (..) er (..) in this country there's an appalling lack (..) of real provision of (..) services (..) for education (.) for *life* education, learning going on and on and on. (..) It's all been cut back. (Retired Geomorphologist, resident in Dorset)

Amateur interest groups, lifelong learning and adult education may thus have an important role in attempts to bridge the gap between popular and academic geographies.

In conclusion, gaps evident within geography may be considered responsible for the declining numbers of students pursuing the subject within secondary school and higher education domains, and for an evident lack of popular interest in geography as a subject (as opposed to in the form of activity) amongst publics. The example of geology has been cited as representative of a discipline in which the breakdown of communications between elements of education has created an extreme situation of decline. If similar circumstances are to be avoided within geography, steps must be taken to (re)connect variable aspects of geographical encounter. Kent (1999) has highlighted three key challenges for geography in the future. First, to improve the image of geography amongst publics. Second, to re-establish communications within the discipline. Third, to ensure that geography connects with developments in the outside world. The circuits of geographical

integration introduced within this chapter represent a possible approach towards the achievement of these three goals.

Chapter 7

Conclusion

Chapter 7: Conclusion

This thesis has presented the results of a study investigating approaches towards the development of formal and informal geographical knowledges within the setting of the Dorset coast. In the light of threats to the future of geography in schools and higher education, it has been determined that publics may not always be aware of the frequency with which they encounter geography and the relevance of the subject to their everyday lives. Approaches to the development and popularisation of geographical knowledges were thus investigated within this study. The research focused upon three particular frameworks for geographical encounter. First, the fieldtrip, which Ballantyne (1998, 1999) suggests is one of the most enjoyable and memorable aspects of a formal geographical education and has the potential to improve the profile of geography amongst students. Second, popular encounters of the geographical landscape, incorporating the experiences of both local and visiting publics. Third, in the context of the above themes, the provision of interpretative materials and representation of the Dorset coast which provides the opportunity for visiting publics and educational groups to encounter and develop informal and formal geographical knowledges.

The specific objectives of the study were as follows:

1. To examine the extent to which fieldwork contributes to formal geographical encounters.
2. To study informal geographical encounters through the medium of tourist visits and to determine the extent to which geographical interpretation provision in Dorset contributes to the development of geographical knowledges.
3. To develop a framework for the exchange of ideas and the (re)connection of communication channels between variable geographical audiences in an attempt to enhance prospects for the development of diverse but

integrated geographical knowledges within formal and informal learning domains.

The remainder of this chapter is subdivided according to the framework of objectives.

7.1 Encountering formal geographies

> To examine the extent to which fieldwork contributes to formal geographical encounters.

Within formal geographical education, it has been widely assumed that the fieldtrip encounter makes a valuable contribution to the development of students' geographical knowledges (see Kern & Carpenter, 1986; Pinet, 1989; Foskett, 1999). However, McEwen (1996) has called for the benefits of field-based learning to be substantiated in order that the place of fieldwork within formal education may be secured. Research within this thesis suggests that it is in fact difficult to isolate the benefits of fieldwork due to the broad variability of learning encounters that come under that rubric. While the extensive citation of a limited number of Dorset's 'classic' landform sites in curricula and textbooks creates a narrow setting for formal geographical encounters amongst visiting students, variability instead arises from a number of other sources which may be broadly divided into the spheres of teaching, learning and fieldwork experiences.

First, teaching approaches contribute to the variability of learning experiences amongst students. Provisions and contexts for formal geography fieldwork in Dorset are wide-ranging, reflecting the popularity of the area amongst educational groups. Teachers may opt to teach an entire field course themselves, or they may recruit the support of local experts, creating diverse teaching combinations. Second, differences further arise from the existence of a continuum (Fuller *et al.*, 2000) between widely criticised inactive (see for example Rees & Harris, 1973; Pinet, 1989) and more favoured active approaches to learning (see for example Foskett, 1999;

Nundy, 1999). The degree to which educational settings allow interactions and exchanges of knowledge constitutes a further influence. In addition, non-academic (experiential) elements of fieldwork may contribute to the diversity of geographical encounters. Personal and social interactions and leisure opportunities form 'memorable episodes' in the minds of students (Mackenzie & White, 1982) and may fulfil an important role in creating links between learning and everyday encounter.

Third, although Ballantyne (1998, 1999) highlights the importance of fieldwork in enthusing students in formal geographical learning, the variability of fieldtrip encounters at the Dorset coast suggests that 'fieldwork' is not a singular activity. Fieldtrips adopted variable approaches which created both positive and negative encounters for students. Experiences were further influenced by the personal characteristics and preferences of the individual. The diversity of socio-cultural backgrounds, embodied qualities and popular interests subsumed under the banner of 'student' was such that fieldwork could not be assumed to have relevance to the everyday encounters of each individual, nor could links between fieldwork, enjoyment and student recruitment be expected. The onus is thus placed upon teachers and fieldwork providers to create a stimulating, inspiring and enjoyable setting for fieldwork, taking account of the variability of student interests and encounters, and the complex and individualist nature of learning.

Kern & Carpenter (1986) and Fuller *et al.* (2000) have made valid attempts to investigate the legitimacy of different (active / inactive) approaches to learning within the field. Their findings support the suggestion that fieldwork learning encounters are variable, constructing both positive and negative outcomes for geographical knowledge developments. This thesis may be considered to expand upon such research. Key findings of the study suggest that variability arises not just from the alternative approaches to teaching and learning, but also in terms of the settings and frameworks in which learning proceeds and the contribution of factors such as student interactions (see Mossa, 1995) and non-academic experiences (see Wendling, 1989; Nairn, 1996, 1999). Nundy (1999:197) highlights that "the

framework for learning ... requires very careful thought and attention. This would appear to be the crux of the 'fieldwork factor'". Chapter 4 supports the notion that the creation of a inspiring and motivational setting for formal geographical learning and encounter is a fundamental element of fieldwork construction.

7.2 Interpretation and informal geographies

> To study informal geographical encounters through the medium of tourist visits and to determine the extent to which geographical interpretation provision in Dorset contributes to the development of geographical knowledges.

The diversity of tourism encounters along the coastline and the frequency with which these encounters incorporate aspects of geographical interest makes Dorset an ideal location for the study of informal knowledge constructions. The popularity of the Dorset Coast Path amongst short and long distance walkers, the widespread interest in fossils at Charmouth and the numerous landform 'attractions' all would seem to enable linkages to be developed with the geographical concept of landscape. However, the research revealed that visiting publics frequently perceive and value the Dorset coast as an aesthetic concept, framing the landscape within their personal and cultural representations and rarely indicating an awareness or interest in the pedagogical and geographical content of their encounters. As a result, individuals often fail to participate in geographical knowledge development in an area where the coastal landscape forms an invaluable resource for informal (and formal) learning. Developments of informal and popular geographical knowledges may be considered important in that alongside awareness of the value and relevance of geography within everyday encounter, they may feed back into the enhanced popularity of formal geographical education within school and higher education. To encourage an interest in informal geography amongst publics, it may be necessary to alter the framework through which individuals perceive and experience the landscape.

Interpretation is a particular medium through which individual perceptions, values and learnings of geography may be influenced and enhanced (Spencer, 1991). Dorset's six coastal heritage centres may be considered instrumental in the provision of geographical and geological interpretation for visiting (both tourist and education) audiences. The centres incorporate popular and accessible interpretation media and promote the active benefits of personal interaction and experience within informal learning. This research revealed that the heritage centres fulfil a significant role in enhancing visitors' knowledges of geography, and may contribute to an expansion of their interests in the subject. A particular obstacle to the development of informal geographical knowledges at the Dorset coast thus relates to the encouraging of heritage centre visitation amongst publics.

Popularisation of geography may be achieved through the construction of explicit links between interpretative informal learning encounters and individuals' everyday interests and experiences (Macdonald, 1995; Lee, 1998). A contextualisation of informal learning may be identified within the particular example of Dorset County Council's *Jurassic Coast Project*. The aim of the scheme is to interpret the geological and geographical landscape of the Dorset coast through the establishing of clear links with popular interests in fossils and dinosaurs. The project aims to open a Jurassic Visitor Centre in which the display of popular connections assists in the development of informal knowledges amongst publics. It may thus alter the framework through which individuals perceive the coastal landscape. However, popular interests are not limited to the realms of fossils and dinosaurs. The Dorset coast provides opportunity for the amateur study of wildlife, archaeology and industrial heritage amongst other interests and caters for varied outdoor activities. The range of popular values may create difficulties for interpretation providers, contributing to problems of accommodating and appealing to variable audiences (Keene, 1989; Falk & Dierking, 1992).

The study of popular knowledges, understandings and perceptions of geography expands on the work of Public Understanding of Science initiatives. Since the 1980s, the Royal Society's Committee for the Public Understanding of Science (COPUS, 1992, 2000; Royal Society, 2000) has undertaken research into the concepts and consequences of science within society and has engaged in the promotion of public understandings of science. However, the work of COPUS has been widely criticised for adopting a reductionist one-way approach to public involvement in science (see Fitzgerald & Webb, 1994; Michael, 1996; Gregory & Miller, 1998). Porritt (2000*a*:110) notes that "scientists have got to understand people if they want people to understand science". Within this thesis, research into public understandings and knowledges of geography accepts the validity of diverse knowledges and experiences. Attempts to popularise geography thus represent a feedback approach, highlighting the importance of an academic acceptance of the legitimacy of popular geographical encounters.

7.3 Bridging the gap

> To develop a framework for the exchange of ideas and the (re)connection of communication channels between variable geographical audiences in an attempt to enhance prospects for the development of diverse but integrated geographical knowledges within formal and informal learning domains.

The research undertaken within chapters 4 and 5 of this thesis revealed the existence of gaps or disparities between different branches of geographical encounter. Gaps exist both between formal (academic) and informal (popular) geographical domains and between variable elements of formal (academic and school) education. Significant differences exist in terms of the subject content and pedagogic style of school and higher education geography teachings and the relationship between academic and popular geographies is similarly remote, with the contrasting domains incorporating diverse conceptions of geography. Within this study, the failure of variable geographical audiences to communicate and exchange knowledges and ideas was considered to be at least partially responsible for the negative

image of geography amongst publics (Shaw & Matthews, 1998), and similarly for the declining number of students pursuing the subject within formal education.

Findings relating to the existence of gaps between variable branches of geography contributed to the construction of a circuit diagram (after Johnson, 1986), representing an approach towards the (re)integration of variable components of geography. The circuit focused upon the (re)connection of communications between both school and higher education geographies and between academic and popular geographies. It introduced two particular themes. First, the circuit recognised the importance of formal school (especially primary) education in enthusing students in geography (see Binns, 1994; Catling, 1999*b*). At this stage, links may be established between informal (popular) and formal geographies, for example through utilising children's frequent fixations with dinosaurs. Second, the circuit required an academic acknowledgement of the importance of popular and amateur contributions to geography, and a reconsideration of the accessibility of academic work. In Dorset, heritage centres may constitute a medium for such interactions without threatening the specialism of higher education geography.

Several authors have called for steps to be taken to ameliorate the gaps between different geographical domains (see for example Bradford, 1996; Daugherty & Rawling 1996; Rawling, 1996*a*). Kent (1999:289) suggests that disparities result at least partially from the fact that "school geography neither reflects the lives of students nor the geography taught in universities". He highlights three possible approaches to the consolidation of geographical domains. First, to improve the image of geography amongst publics (see also Rawling, 1996*a*). Second, to re-establish communications within the discipline (see also Goudie, 1993). Third, to ensure that geography reflects developments in the outside world (see also Shaw & Matthews, 1998). The research presented throughout this thesis constitutes an attempt to address these issues, assessing public perceptions and understandings of geography and relating findings to formal geographical education.

The diagram representing circuits of geographical integration introduced in chapter 6 forms an extension to work instigated by Johnson (1986), but expanded upon by several other authors including Burgess (1990), Squire (1994) and Norton (1996). Johnson's 'circuit of culture' model was constructed to portray circuits of the production, circulation and consumption of cultural objects. It has also been applied within the spheres of media and tourism. In this thesis, the diagram has been adapted to represent potential circulations of information and communication between academic, school and popular geographies. The diagram involves considerable modification of Johnson's design, involving the superimposing of three circuits to represent interactions of knowledge and experience both between and within individual geographical domains. The circuits represent a possible approach towards the achievement of Kent's three goals.

7.4 Recommendations for further research

The purpose of an ethnographic study is primarily interpretative and investigative (Marcus & Cushman, 1982; Cresswell, 1998). However, during the course of this ethnographic study of variable geographical audiences at the Dorset coast, several themes which require further questioning were revealed.

Calls for the value of fieldwork to formal geographical education to be substantiated within research (McEwen, 1996) have yet to be answered. Despite the complexity that this study revealed may be contained within such investigation, the future of fieldwork is under threat unless the value is proven (Smith, 1999). This study highlights the variability of fieldtrip encounters and the positive and negative outcomes for student learnings. Further research into the specific factors contributing to positive geographical learning encounters might assist in the development of programmes and guidelines for fieldtrips, of particular benefit to those teachers who lack specialist geographical knowledges. In Dorset, the development of resources and

information related to alternative (non honey-pot) sites may alleviate the environmental damage caused by overcrowding.

Study of student valuations of fieldtrips was instigated within this study through a case study of year five pupils at Hengistbury Head. The case study revealed the variability of individual student encounters, but also highlighted some common influences upon fieldwork enjoyments. However, the study was focused upon a specific age group and site, hence could not be extrapolated to incorporate all educational trips. Further research may enable the maximisation of student enjoyments of fieldwork (Ballantyne, 1998, 1999) with the potential to enhance student uptakes of geography within secondary and higher education.

In terms of informal learning, this study sets the scene for a more detailed investigation into the geographical knowledges of visiting publics in Dorset. Much research has emphasised the benefits of interactive and participative approaches to interpretation (Hooper-Greenhill, 1989; Ellis *et al.*, 1996; Bradburne, 1998), those approaches already adopted within the heritage centres of the Dorset coast. However, to maximise the opportunities for informal learning, this study suggests that links may be forged between geographical knowledges and the interests and experiences of visiting audiences. Further research could thus focus upon the popular pursuits and pastimes of visiting publics to determine themes for interpretation. The study also highlights the difficulties of establishing heritage centre visitation as a widespread and popular approach to the development of geographical knowledges. This is another area which requires further investigation.

The circuits of geographical integration introduced within this thesis constitute an approach towards the establishment of communications between variable geographical domains. The implementation of such an approach may contribute to improvements in the status of geography amongst public audiences, which may in turn address the decline in student recruitments. Within this study, the model represents a conceptual framework based upon the thematic findings of the research. Further investigation into

the mechanisms by which the model may become validated and the possible outcomes of implementation may contribute to the (re)connection and (re)integration of variable geographies.

This thesis forms an important component in a sequence of ongoing research. Its contribution can be assessed both in terms of the details presented for this specific study and also the conclusions which have much wider general application. The results provide a clear guide to where additional work is required.

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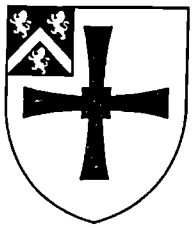
Appendix 3.1

Survey of Visiting Publics

Survey of Visiting Publics



Department of Geography
University of Durham

LOCATION: .....

Today's date: ..... Number in group: .....

Ages: under 18 ..... 25 - 40 ..... 55 - 65 .....

18 - 25 ..... 40 - 55 ..... 65+ .....

Whereabouts do you come from? .....

Where are you staying? .....

How long for? .....

1) What are the main reasons you have come to the Dorset coast?

.....

.....

.....

2) What do you like about the Dorset coastline?

.....

.....

.....

3) If you could sum up the Dorset coast in three words, what would they be?

.....

.....

4) Do you feel that the coastline should be left to erode naturally, or do you think that erosion should be prevented by sea walls and defences?

.....

.....

5) Did you study geography or geology at school? If yes, did you study coastal processes in particular?

……

……

……

6) Did you learn about the Dorset coast?

……

……

7) Did you ever come here on a fieldtrip? If yes, where? How old were you?

……

……

8) Do you know how Lulworth Cove (or Chesil Beach or fossils) formed? If yes, how?

……

……

……

……

9) What did you think was the most interesting thing about the Heritage Centre?
OR Have you visited any of Dorset's coastal heritage centres?

……

……

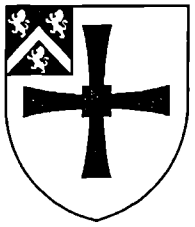
10) If you wanted to find out more about the Dorset coast, what would you do? Are you interested enough in the Dorset coast to seek more information?

……

……

Appendix 4.1

Student Questionnaire Survey



Department of Geography
University of Durham

Student Questionnaire Survey

Name: .....

School / College: .....

Year: .....

Age: .....

Where have you been staying? .....

1) What topics have you studied while you've been in Dorset?

.....

.....

.....

.....

2) Had you studied these topics at school before the fieldtrip?

.....

3) What books or hand-outs have you used when studying these topics?

.....

.....

.....

4) Have you understood the topics and the fieldwork associated with it?

.....

.....

5) Which of the topics have you found most interesting? Why?

……

……

6) Which have you found least interesting? Why?

……

……

7) Is there any more information you feel would have helped you or any extra resources / equipment that might have been useful?

……

……

……

……

……

8) Will you be using your fieldwork data for coursework or case studies?

……

9) Overall, have you enjoyed your fieldtrip in Dorset? Any aspects in particular?

……

……

……

Appendix 4.2

Worksheets for Key Stage 2 fieldtrip at Hengistbury Head

WORKSHEET A: The Beach

Name: ..... **Date:** .....

1. Collect 10 stones and put them into 3 groups of your choice.

2. How have you grouped them? .....

.....

3. Draw a stone from each of your groups:

Group 1	Group 2	Group 3

4. Now put them into three other groups. How have you grouped them this time?.....

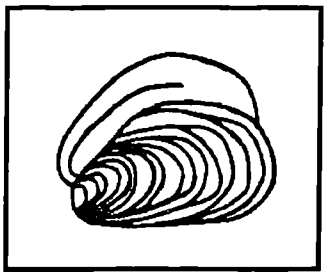
5. Can you work out where the TIDE LINE is? (This is where the waves reach at High Tide). How can you tell? .....

.....

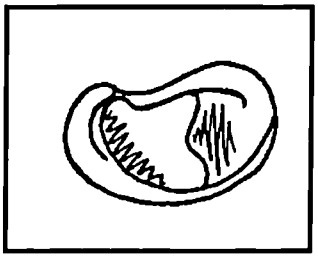
6. Where do you think the rubbish has come from? .....

.....

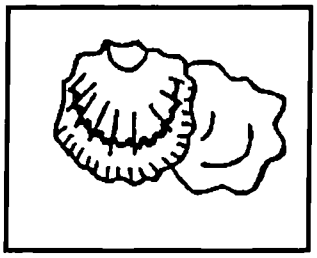
7. Walk along the tide line and see if you can find these things. Tick the boxes if you manage to find them.



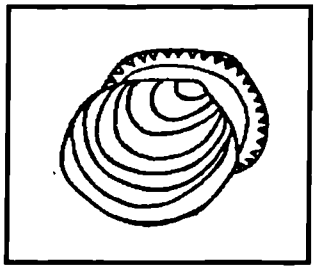
1. A Mussel Shell ☐



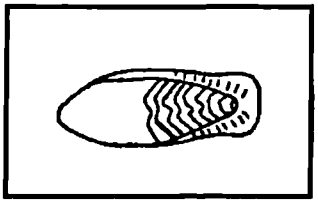
2. A Slipper Limpet Shell ☐



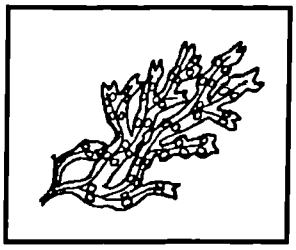
3. An Oyster Shell ☐



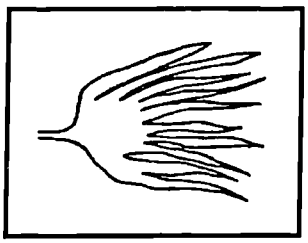
4. A Clam Shell ☐



5. A Cuttlefish Bone ☐

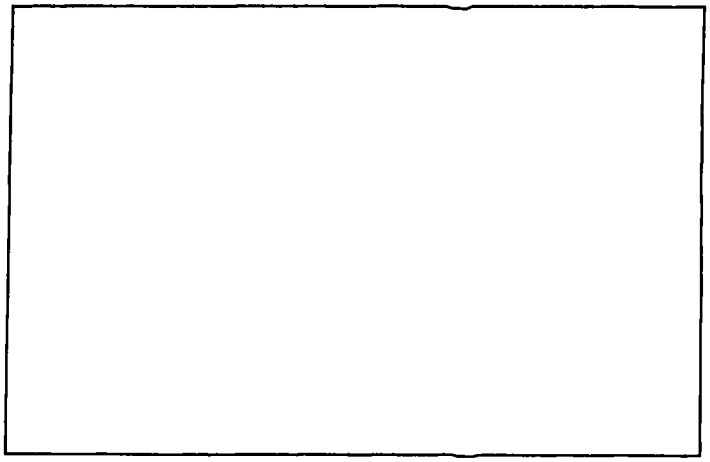


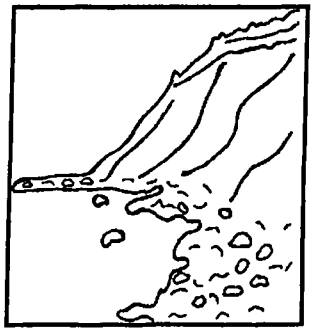
6 Bladder Wrack Seaweed ☐



7. Oarweed Seaweed ☐

8. If you find something else unusual (NOT rubbish!), draw it here. You could also look it up in the book to try to find out what it is.





WORKSHEET B: The Cliffs

Name: ..... **Date:** .....

1. Draw a picture of the cliff.

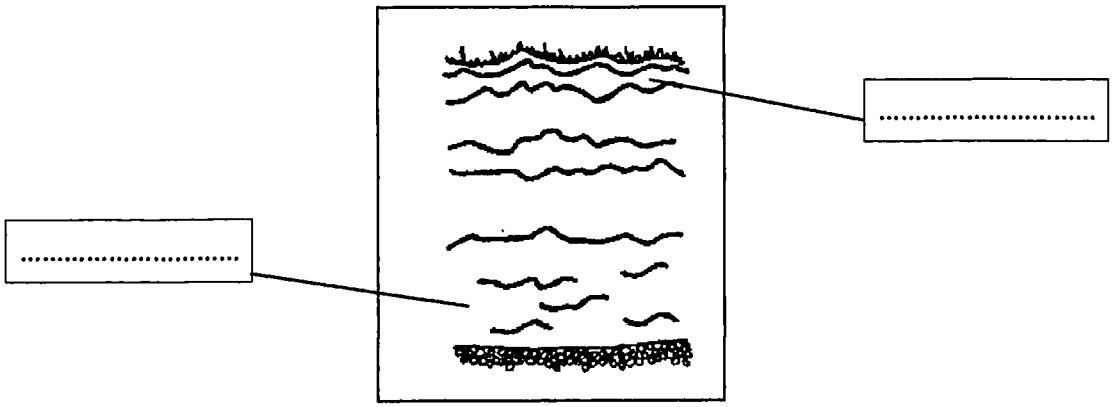
2. How high do you think it is (in metres)? .....

3. Why do you think the different rocks are in LAYERS? .....

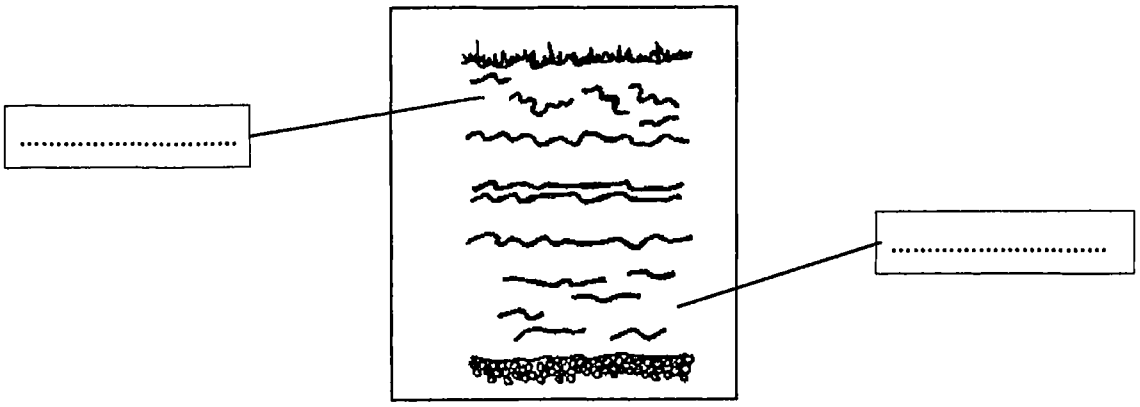
.....

.....

4. On this diagram, see if you can label the OLDEST and YOUNGEST rocks.



5. On this diagram, see if you can label the HARDEST and SOFTEST rocks.



6. Collect 5 stones which you think might have come from the cliff. Can you work out which layer they have come from?

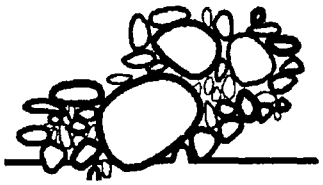
7. Can you see an area where the cliff has fallen? .....

8. Why do you think this has happened? .....

.....

.....

(**Clue:** Is the cliff made of hard rock or very soft and crumbly rock???)



WORKSHEET C: Beach Materials

Name: ..... **Date:** .....

1. Use the CALLIPERS to measure the longest side of 6 stones. Write down the measurements here.

   (a) ..... **(d)** .....

   (b) ..... **(e)** .....

   (c) ..... **(f)** .....

2. Use the SIEVES to look at the different sizes of sand on the beach.

   The biggest sieve has holes of 2 mm. It is used to measure COARSE SAND.

   The middle sieve has holes of 0.2 mm. It is used to measure FINE SAND.

   The smallest sieve has holes of 0.075 mm. They are so small you can hardly see them! It is used to measure SILT, which is like a very very fine sand.

3. Which sieve did most of the sand on the beach fall through? .....

   .....

4. How do you think the sand came to be on the beach? .....

   .....

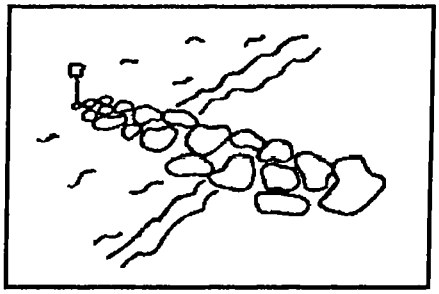
5. How do you think the pebbles came to be on the beach? .....

.....

.....

6. Go and stand on top of the ROCK GROYNE.

This is a man-made barrier made of piles of rock. You will see that there is more sand on one side than the other.



7. Can you think why this might have happened? .....

.....

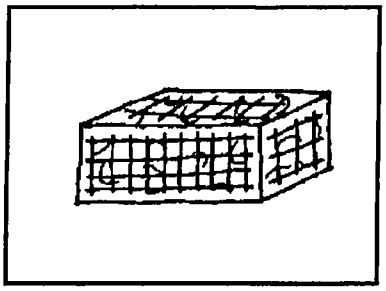
.....

8. Why do you think they have put the rock groyne on the beach? .....

.....

.....

9. Behind the rock groyne, in front of the cliff, there are wire cages full of pebbles. These are called GABIONS.



11. What do you think these are for? .....

.....

.....

Appendix 5.1

Detail of Semiotic Landscape Descriptions amongst Visiting Publics

In the questionnaire survey included within *Appendix 3.1*, respondents were asked to select three words which summed up their perceptions and values of the Dorset coast. The responses to this question have been analysed and interpreted within Chapter 5. However, the table below provides further detail of the words selected. The table has been subdivided according to the categorisations defined within *Table 5.i.* The first column provides the number of individual words which have been classified within each category. The second column states the frequency with which any word from the category was chosen by respondents. The third column presents this figure as a percentage of the total number of words cited, giving an indication of the prominence of that category within responses. The final column lists the three most popular words within the category and states what percentage of respondents used them.

Category	No. different words used	Total no. of category occurrences	Percentage of total (n=633)	Top three words / percentage use by respondents (n=211)
Aesthetic	27	166	26.2%	Beautiful / 25% Scenic / 16% Picturesque / 11%
Descriptive	41	155	24.5%	Clean / 15% Unspoilt / 12% Varied / 12%
Features	12	96	15.2%	Scenery / 24% Coastline / 15% Beaches / 10%
Activities	5	17	2.7%	Walks / 2% Wildlife / 2% Boats / 2%
Experiential	16	50	7.9%	Good for kids / 7% Accessible / 5% Safe / 4%
Atmospheric	16	58	9.2%	Peaceful / 6% Quiet / 4% Relaxing / 4%
Weather	5	32	5.1%	Good weather / 6% Wet / 2% Windy / 2%
Pedagogic	6	40	6.3%	Interesting / 15% Historical / 2% Educational / 0.5%
Geographical	6	19	3.0%	Fossils / 2% Geology / 2% Rocks / 2%